



EXCERPTS ON KEY POINTS FOR THE RUSSIAN TRANSLATION

FOREST LAW ENFORCEMENT AND GOVERNANCE (FLEG) IN EASTERN EUROPE AND NORTHERN ASIA (ENA)

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Forest Law Enforcement and
Governance Process for Europe and Northern Asia
(ENA-FLEG)

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Introduction

Poor governance in the forest sector is a generalized and significant problem in many countries. Forest harvesting, processing of wood, and trade of forest products often take place in unauthorized ways and involve many illegal operators. Achieving a reasonable measure of sustainable forest management will likely remain an unattainable and distant objective unless governments are able to reach an acceptable degree of legal compliance.

Increasing awareness of the gravity of illegal activities in the sector is motivating governments to devise strategies to improve the level of compliance with the law. Given that some of the factors that motivate and induce illegal logging and trade operate through international markets, these strategies require international as well as national initiatives.

The Forest Law Enforcement, and Governance process (FLEG) is a multilateral, multistakeholder strategy for improving governance and legal compliance through the organization of corrective actions at both national and international levels. FLEG is a major multinational effort involving governments of interested countries and multilateral and bilateral donors focusing on combating illegal acts affecting forest resources. After the G-8 countries launched its Action Program on Forests in 1998, various institutions—including the World Bank, the UK Department for International Development, the US State Department, the Swiss State Secretariat on Economic Affairs, and others—designed a process involving ministerial meetings at the regional level to develop political commitment to set up a common framework for regional actions. The FLEG initiatives focus, at least in the initial stages, on illegal logging and trade of timber and processed timber products. This process is now under way, involving countries of East Europe and North Asia (ENA).

The present document aims at providing a reference framework for facilitating communication and enriching the FLEG debates and processes in this region, covering the Russian Federation, Central Asia, and the Balkans. It should be noted that the new European Union (EU) Member Countries from Central and Eastern Europe—the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, the Slovak Republic, and Slovenia—were excluded from the analysis because with their recent accession to the EU, their forest management and trade aspects will change fundamentally in the coming years.

This document containing selected excerpts of the original document available in English has been prepared for the St. Petersburg Ministerial Conference while waiting for the translation of the complete document. It is not intended to be distributed as a self-standing document except for the purposes of the Conference.

1. Forest Resources in the ENA Region

1.1 Forest Resources: Extension and Economic Importance

Three different dominant uses of the forest resources can be distinguished in the ENA region:

- In some countries, commercial forestry is the dominant economic use of forests, although they also have a major role in providing fuelwood and non-timber

products for the rural population, and in particular for the rural poor (for example, in Bosnia and Herzegovina, Bulgaria, Russia, and Serbia and Montenegro).

- In other countries, forests serve primarily a social and environmental function, but some commercial forestry is also practiced (for example, in Albania, Armenia, Azerbaijan, Georgia, Moldova, and Ukraine).
- Finally, other countries import most of their commercial forest products, dedicating their relatively scarce forest resources mainly to social and environmental functions (for example, in Kazakhstan, the Kyrgyz Republic, Tajikistan, and Uzbekistan).

These country differences have considerable implications for the incidence and nature of illegal logging and trade. They suggest that strategies to control illegal acts will need to be tailored to the specific circumstances of each country.

1.2 Trade in Forest Products

The above characterization of the forest sector offers the following insights into the vulnerability of different countries to illegal logging and trade practices:

- There are countries that have very limited forest resources. In these countries the absolute importance of illegal logging and trade is in all probability low (although it may be considerable when measured in relative volume and values). In contrast, there are other countries with abundant forest resources, particularly Russia. Even if a small harvesting proportion takes place in illegal ways in these countries, the absolute volume and value would be large.
- In all countries, forests are owned mainly, and in some cases exclusively, by the state. Private ownership of forest resources is limited to a few countries and to a relatively small proportion of the national forest resource area. Thus, remedial strategies to control illegal logging, such as the risk of forest expropriation in serious cases of infringement of the law, cannot make much use of instruments that only operate in a context of private property. The range of potential strategies to combat illegal logging will likely be very different in those few countries where private ownership is present.
- International trade has the potential of both offering powerful incentives to engage in illegal operations and implementing remedial actions to control those illegal operations. The value of illegal exports is high in some countries, reaching several billion dollars per year and much of that takes place in the form of rough industrial logs. “Cut and run” operations are easier to carry out if unprocessed logs are exported and there are no substantial associated investments in costly, visible, and stationary industrial processing plants that can be subject to expropriation. International trade, however, also provides options that can help producer governments control trade-driven illegal logging.
- Official figures are in some cases unreliable and may therefore not give a clear idea of the potential illegal amounts logged and traded. Unrecorded exports of logs, for example, may be substantial. However, official figures give at least an

idea of the magnitude of potential values, should a proportion of economic activity take place in illegal ways.

2 Magnitude and Impact of Illegal Logging and Illegal Trade

2.1 Definition of Illegal Logging

In broad terms, main violations associated with illegal logging and trade can be divided into eight groups:

- theft of wood
- unauthorized harvesting
- noncompliance with regulations related to timber harvesting
- noncompliance with the procedure of timber sales or concession award
- manipulation of timber data
- evasion of taxes and fees
- noncompliance with regulations concerning transport or export of timber
- noncompliance with labor laws

In the ENA countries, explicit definitions for illegal logging are usually not available. However, in practice, definitions can be derived from such violations of the law as reported in 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.

Typically, the statistics on illegal logging in the countries involved in the study refer to violations involving tree theft, unauthorized harvesting, and noncompliance with cutting regulations. Corruption in connection with timber harvesting is not recorded under illegal logging unless it involves physical removal of trees. The other types of illegalities are not covered.

2.2 Magnitude of Illegal Logging and Trade

2.2.1 Methodological Aspects

Methodological problems make estimates of illegal logging rather imprecise. While estimates of industrial production (paper, wood-based panels, sawnwood) are generally deemed to be more reliable than estimates of harvested wood, such estimates still may be affected by “leakages”. Furthermore, in most countries there is just a vague idea of the national consumption of fuelwood, which generally is by far the use that consumes the greatest volume of wood. Finally, estimates of national consumption and of illegal logging also rely on trade statistics, which themselves are plagued by inaccuracies.

Nevertheless, there are cases where the magnitude of discrepancies is hard to explain using legitimate reasons or possible estimation errors. This, together with the abundance of anecdotal information, provides sufficient ground to assert that, although the precise scale of

illegal logging and trade may generally not be known, orders of magnitude are often significant.

2.2.2 The Magnitude of Illegal Logging

Based on official statistics, the volume of illegal logging in the countries involved in the study varies considerably (table 2.1). The lowest proportions have been recorded in Bosnia and Herzegovina, Moldova, Serbia and Montenegro, and Ukraine, where illegal logging volumes account for 0.2 to 2.2 percent of the legal national timber supply. At the other end of the scale are Azerbaijan and Tajikistan, where official illegal logging amounts to 20 to 30 percent of legal supply. In Kazakhstan, illegal logging occurs along the border with China and Russia. In such areas, wood cutting is far beyond what is permitted by harvesting licenses. In Russia, the latest official estimate indicates that illegal logging represents some 11 percent of legal logging. In northwest Russia, the proportion is 6 percent while in the Far East, the share is estimated at 18 percent.¹ In absolute terms, the Russian figure, 9.8 million m³, is of a different order of magnitude compared with other ENA countries.

Table 2.1 Estimated “Official” Data on Illegal Logging

Country	Year	Estimated volume of illegal logging (m ³)	Legal logging (m ³)	Illegal logging as % of legal logging
Albania	2002	28,400	304,800	9.3
Azerbaijan	1988–2005	20,600 ^a	65,000 ^a	32.0
Bosnia and Herzegovina	2003 ^b	41,159	1,850,938	2.2
Georgia	2004	60,846	640,957	9.5
Kyrgyz Republic	2002–4	2,500 ^a	33,000 ^a	7.5
Moldova	2004	3,479	422,000	0.8
Russian Federation	2004	6,500,000	88,200,000 ^c	11.0
- NW Russia	2004	2,000,000	38,000,000	6.0
- Far East	2004	4,500,000	25,500,000	18.0
Serbia and Montenegro	2004	9,136	3,250,000	0.3
Tajikistan	n.a.	1,340–2,010	6,700	20.0–30.0
Ukraine	2004	30,000	12,395,000	0.2

Source: SAVCOR reports and Intercooperation

Note: n.a. = not available.

a. Annual averages for the period.

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

In an alternative approach, the recorded legal supply from forest areas can be compared to estimates of actual consumption of nationally produced commercial timber and fuelwood.² The amount exceeding legal supply is likely to be illegal timber.³ In some cases, these

1. The official estimate is 10 percent of total logging volume; 5 percent in northwest Russia and 10 percent in the Far East (Lesnaja Gazeta 2005). The figures in the text were converted to correspond with the reference point used in other countries, that is, the ratio of illegal logging volume to legal logging volume.

2. The estimates on industrial timber production are based either on existing investigations or 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 and Herzegovina).

3. It should be kept in mind that official figures on legal supply of commercial timber may be underestimated because of data manipulation; industrial timber may be recorded as fuelwood.

estimates were obtained from previous studies (for example, in Russia and Azerbaijan). If several differing estimates were available, the range of these estimates is presented.

The picture emerging from this comparison is less encouraging than that given by official statistics. In all countries actual harvest appears to be larger than legal supply, and in many of them the difference is large. The difference is somewhat larger for fuelwood than for industrial timber (table 2.2).

Table 2.2 Estimated Production and Legal National Supply of Industrial Timber and Fuelwood

Country	Year	Industrial timber			Fuelwood		
		Estimated actual harvest from forest areas	Legal supply from forest areas	Ratio of estimated actual harvest to legal supply	Estimated actual harvest from forest areas	Legal supply from forest areas	Ratio of estimated actual harvest to legal supply
(thousand 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	1	very large	n.a.	10	n.a.
Bosnia and Herzegovina	2003	3,106	2,714	1.1	n.a.	n.a.	n.a.
Georgia	2004	550	70	7.9	2,000	300	6.7
Kyrgyz Republic	2002–4	n.a.	11 ^b	n.a.	330	22 ^b	15.0
Moldova	2004	n.a.	44	n.a.	750	359	2.1
Russian Federation	2004	98,000 ^c	83,000–79,000	1.2–1.4	n.a. ^c	n.a. ^c	n.a. ^c
Serbia and Montenegro	2004	1,995+	1,900	1.05+ ^d	2,150	1,350	1.6
Tajikistan	n.a.	n.a.	n.a.	n.a.	90	7	12.9
Ukraine	2004	1,600	1,500	1.07	n.a.	6,300	n.a.
Uzbekistan	2004	n.a.	8	n.a.	n.a.	18	n.a.

Source: SAVCOR reports and Russian forest Service, 2005

Note: n.a. = not available.

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

b. Annual averages for the period.

c. Total harvesting volume including also fuelwood representing possibly up to one-fourth of total volume.

d. Stakeholder opinion, the majority estimated that illegal logging is 5 percent or more of legal supply.

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

2.2.3 *The Magnitude of Illegal Trade*

Some of the negative impacts of illegal logging may “leak” abroad through illegal exports. There is limited information available on illegal exports of wood products from the ENA countries; but looking at legal exports, Bosnia and Herzegovina, Georgia, and Russia, and possibly Serbia and Montenegro, all ship significant volumes abroad, and it is likely that these countries are also the main sources of illegal exports. 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.

Table 2.3 Estimates of legal and Illegal Exports of Wood Products of Selected ENA Countries

Country	Year	Legal exports			Illegal exports
		Roundwood	Sawnwood	Firewood or charcoal	
		(thousand m ³)			
Albania	2002	—	95	12,000 tons	
Armenia	2002	5	5		
Bosnia and Herzegovina	2003	221	927		
Bulgaria	2002	9	330	6	5–10% (WWF estimate)
Georgia	2004	—	132		30,000–35,000 m ³
Moldova	1998–2004		2 ^a		
Russian Federation	2003	45,000	10,000	n.a.	25% roundwood (40% to China) 15% sawn softwood 20% sawn hardwood
Serbia and Montenegro	2002	33	n.a.	1	< 1%
Uzbekistan	2002		3		

SAVCOR reports

Note: n.a. = not available. — = no data.

a. Annual average for the period.

Russia is clearly the main timber exporting country in the ENA region with its exported volume being significantly larger than the combined export volume of all other countries combined. In 2003, the total Russian log export volume was reported at 45 million m³. The destinations receiving the bulk of Russian log exports include China, Finland, Japan, and Sweden. In contrast, sawnwood is shipped to a more diverse clientele. The Arab Republic of Egypt, Japan, and the United Kingdom are the main clients but together they receive less than a quarter of the total export volume (Seneca Creek Associates, LLC and Wood Resources International, LLC 2004).

Illegal log exports from Russia are estimated at about 25 percent of total log exports, but for Russian exports to China, the proportion is probably higher, reaching 40 percent. For sawnwood exports, the share of illegal softwood products is estimated at 15 percent and that of hardwood products at 20 percent (Seneca Creek Associates, LLC and Wood Resources International, LLC 2004). The close relationship between exports and illegal logging is implied by the assessment made by the Federal Forest Resource Agency, according to which the forests most affected by illegal logging are those in export zones adjacent to Europe and Finland and, in the Far East, near China and Japan (Illegal Logging 2005).

2.3 Impact of Illegal Logging and Trade

Impact on government finances. In countries where the volume of illegal logging is large, the value of illegally logged wood commands a substantial market value. If this wood has been stolen from state property, government losses can be considerable. In countries for which data was available, the estimates range from US\$4.8 million per year in Moldova to US\$48.2 million (the higher estimate) in Azerbaijan (table 2.5). In Albania, Bosnia and Herzegovina, Bulgaria, and Georgia, the estimates are between US\$11.4 million and US\$22 million. In

Azerbaijan, the lower estimate puts the value at US\$14.4 million. WWF (2004) estimates that the Russian government loses US\$1 billion (a billion is 1,000 million) a year due to illegal logging. Improving legal compliance would stop these losses, although it would not generate immediate government financial revenue.

Elimination of illegality and corruption in logging and trade may yield other important revenues contributing directly to the income of public and private forest owners. If corrupt practices were eliminated, the result would show in higher revenues. Unfortunately, there are no estimates available on the financial losses caused by corruption in any of the countries involved in this study. However, in several countries stakeholders expressed the view that the impact of corruption probably equalled or was higher than losses caused by theft.

Reducing incentives to sustainable forest management. Illegal logging and trade may have a depressing effect on timber and wood products prices making it difficult, or impossible, for legal operators to compete in markets. There are two principal mechanisms depressing prices:

- Illegal operators may have lower costs than legal operators. While illegal loggers and traders sometimes need to pay bribes and incur costs to avoid detection, they have the advantage of forgoing taxes and stumpage fees. They can also ignore environmental and other regulations that can be complex and expensive to satisfy. In fact, if there were no such reduced costs and net financial advantages, illegal logging and trade would be much less of a problem.
- Expanded timber supply resulting from illegal logging may drive timber prices down. This effect is important if the share of illegal products in the market is substantial and if the elasticity of price-demand for the products is relatively high.

Changes in the volume and composition of long-term investment. The reduction in product prices resulting from illegal logging and trade will tend to divert investment away from legal forest harvesting and management. Legal entrepreneurs may be progressively displaced as illegal and environmentally harmful operations dominate the market.

Responsible investors tend, in fact, to shy away from countries where the rule of law is weak and investment risks are high. However, unscrupulous investors find this kind of environment advantageous for their operations. Thus, over time it is likely that corporations that engage in illegal cut-and-run operations will dominate the forest sector in these countries. A compounding factor is that the financial proceeds of these illegal operations tend to be sent abroad, thus reducing the potential multiplier effect derived from the economic activity associated with illegal logging.

Even if illegal logging activities seem to have some positive effects in fuelling economic growth in the short term, one can only underline that such effects are obtained at high risks and at the cost of reduced future production. Illegal actors focus exclusively on short-term profits and are bound to disregard the long-term sustainable production capability of forests. Illegal logging is associated with boom-and-bust economic sequences.

The impacts of illegal activities on the rural poor are complex. Illegal logging may provide them with a source of employment, and in many cases illegal logging is a necessity to obtain fuelwood and construction timber for household needs. However, these benefits may be short-lived if illegal logging is unsustainable and leads to exhaustion of fuelwood and timber supplies.

In some cases, strict enforcement may disproportionately hurt the poor (Kaimowitz 2003). Where the rural poor have individual or community ownership of forest resources, legal sustainable forest management prescriptions, including the preparation of complex forest management plans and periodic reporting, are simply beyond the reach of the poor that do not have the technical capacity, access to information, and financial resources needed for compliance. If the woodlots are small, the cost of compliance may also be disproportionate to the expected benefit.

The net result of these interactions depends on the context in which they take place. In regions where the small state forest enterprises struggle to survive through “improved sanitary cuts” and other illegal activities, social hardship will increase in the short term, simply because the leshoz structures cannot be maintained in their old form as “socially oriented” production units. The intensity and the type of illegality finally affect the poor rural population in different ways. In these and other situations of widespread disregard for the law, it is common that the most powerful groups do not waste time in getting the upper hand, further depriving populations that are already destitute of their means of subsistence. The increase in rural poverty is one of the most certain results of increased illegal activities in forestry.

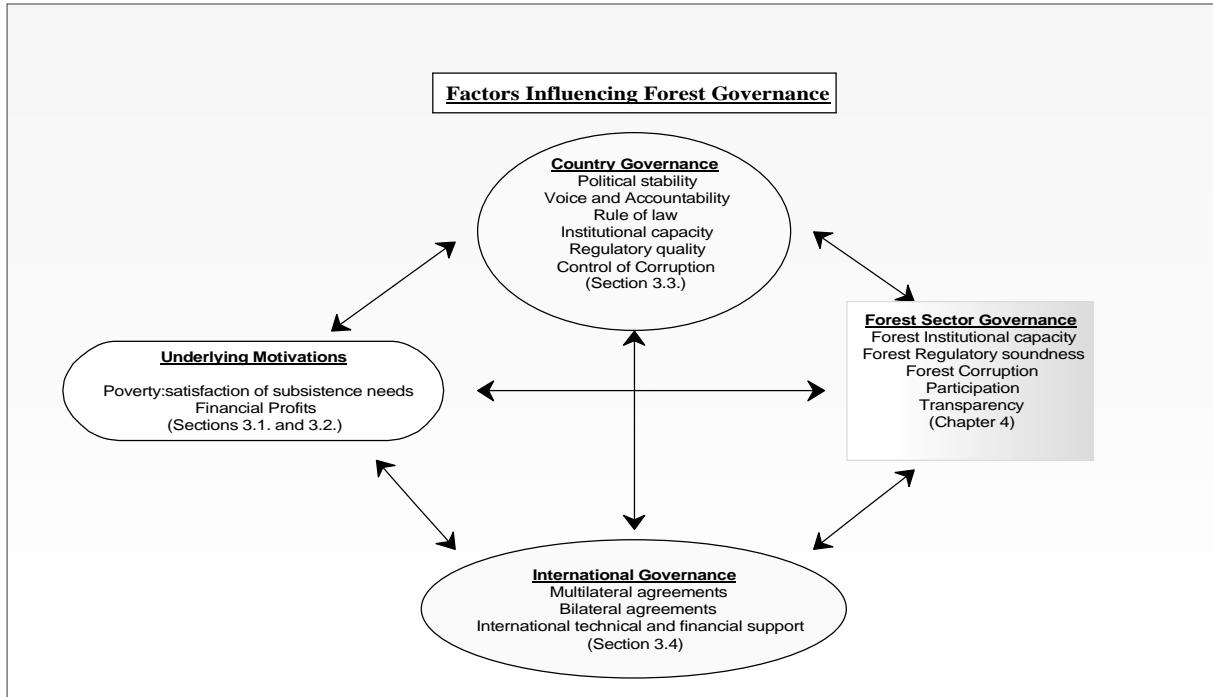
Illegal logging has the most damaging *environmental impact* in situations where it results in the total harvested volume exceeding the maximum level considered sustainable. In most countries, this sustainable limit has been set by defining an Annual Allowable Cut volume (AAC). In the majority of countries 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 wide but is still significant.

Countries where the actual harvesting levels are well below sustainable levels are Bosnia and Herzegovina, Bulgaria, Georgia, Russia, and Serbia and Montenegro. In Russia, the current harvesting level is about 20 percent of AAC. It can be estimated that current harvesting in Bosnia and Herzegovina is about half of AAC, and in Serbia and Montenegro is less than 70 percent of AI.

3 The Role of Good Governance in Controlling Illegal Logging and Trade

Illegal logging and trade occur because of two basic motivations of actors engaging in such activities. The first one arises from the need to satisfy basic demands for fuelwood and construction materials of the rural and urban poor who have limited or no possibilities to satisfy the demand in other ways. The second important motivation is the drive to obtain commercial profits.

Motivations are pursued and satisfied with different intensities, depending on the governance conditions that actors face. These conditions either facilitate forest illegal acts if governance is poor, or constrain them if the quality of governance is high. The governance factors that influence the occurrence and frequency of illegal activities can be divided into those that are external to the forest sector and those that are directly linked to the forest sector itself. The first group of factors is defined by the governance conditions of the country and of the international governance environment in general. Both national (external to the forest sector)



and international governance environments set the conditions and act as external drivers for changing the specific aspects of forest sector governance.

Poverty-driven illegal logging emerges where poor people have little other choice. The harvested quantities are typically small—sufficient for subsistence consumption. In the countries of the former Soviet Union as well as in Albania, the fall of the communist regime led to abolition of energy subsidies and an abrupt rise in the cost of alternate energy sources, which rapidly increased the demand for fuelwood. Because the legal supply of fuelwood was insufficient, illegal procurement expanded as people scrambled to meet their basic needs. In the Balkans, the current situation is less clear. People are probably less dependent on fuelwood than in many of the other ENA countries, but fuelwood is still the main source of energy for a large part of the population. Illegal logging carried out by the poor is individually low in volume, but the number of individuals may be large. In some countries, this is the most important type of illegal logging for total volumes extracted and possibly also for environmental impact.

Poor rural populations seldom participate actively in large-scale commercial logging, although in some cases they may carry out logging for industrial operators.

Commercial illegal logging may involve both industrial timber and fuelwood. For fuelwood, the main commercial markets are in poor urban areas. However, in most cases industrial timber is the predominant commercial product. Individual operations tend to be larger and the number of operators smaller than for poverty-driven illegal activities.

Those that engage in illegal commercial operations do so mainly because of the higher profit potential of illegal acts and the low probability of detection and prosecution. Higher returns are possible because legal compliance carries costs that are not present with illegal logging. These costs may be high if regulations are intricate and bureaucratic processes to obtain

certification of compliance are complex and time-consuming. The greater the difference between the expected financial returns of illegal versus legal logging and trade, and the lower the probabilities of detection of illegal acts, prosecution, and conviction, the greater will be the financial incentives to engage in commercial illegal logging and trade.

4 Forest Governance

4.1 Forest Policy

Over the past 15 years, there has been progress in improving the general framework of governance and advancing institutional reforms in most of the reviewed ENA countries. On the whole, one can state that in the countries where new forest policies have been established (in the Kyrgyz Republic and in Russia , for instance), there are visible trends for introducing new modes of forest governance (leasing of forest land, decentralization of certain decisions to a lower level, and so on).

Especially in Russia, but in other countries as well, the environmental NGOs have forcefully articulated the urgent need to find solutions for curtailing the extent of illegal logging. They are important actors pressing for more transparency in decision making and for the introduction of effective certification systems. This progress is still slow and with limited impact. Official reform measures tend to maintain conventional systems of top-down command and control. There is an important gap between rhetoric and reality, which results in a dual system whereby a rigid bureaucratic command-and-control approach coexists with new and largely unregulated practices based on the concept of a market economy.

4.2 Regulatory Quality

Since 1990 the regulatory framework for protecting and managing forest resources and the adherent body of forest legislation has been revised in most European countries (Schmithüsen, Herbst, and Le Master 2000). Major changes in forest law have occurred and still occur in the countries of Central and Eastern Europe (Abrudan, Schmithüsen, and Herbst 2005; Le Master, Herbst, and Schmithüsen 2003; Mekouar and Castelein, 2002; Schmithüsen, Trejbalova, and Vancura 2004). In transition to an open civil society, in building democratic institutions, and in transition to an open market economy, these countries have the difficult task to develop entirely new public regulations addressing agriculture and forestry, nature conservation, and environmental protection. The ENA countries under review in this paper followed this trend and started the process of adopting new forest laws during the 1990s. The process of revision or adopting new regulations still continues with varying degrees of change toward a market economy.

The most important constraint preventing the countries from making progress in sustainable use of forest resources is their still severely limited capacity to implement the newly adopted forestry regulations. Another impeding factor is the lack of support and incentives that would enable people to satisfy their basic needs. Procedures for allowing harvesting in private forests, for instance, involve excessive bureaucracy, inviting people to circumvent or ignore the applicable forestry rules. Other reported obstacles to implementation of the law concern the capacity of prosecutors and the courts to effectively handle illegal activities in the forest sector. Although in most countries there seems to be an external ombudsman or some other

independent mechanism to respond to public complaints, in some cases these positions are not responsive to complaints related to logging. This weakness is especially critical when addressing illegal logging related to corruption.

The legal procedures on subsistence consumption of fuelwood are often cumbersome, in some countries outright restrictive. In Azerbaijan, the harvesting of firewood and production of charcoal 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, these legal quantities are inadequate to satisfy the needs of the rural people. Moratoriums on logging have been implemented in several countries (Albania and Georgia) but their effectiveness is being questioned. In several cases the continuation of industrial forest operations are reported even after the moratoriums have been declared.

Efforts to design measures to control corruption in the forest sector are extremely difficult if the regulatory framework is faulty, allowing for excessive discretionary decisions based on subjective judgment or personal interpretations of regulations. The task is easier in countries where laws and regulations are clear, allowing transparent involvement and participation of civil society in monitoring governmental activities. Appropriate normative actions to improve legal compliance in the forest sector thus require multiple interactions among different sectors, as well as effective communication among public and private actors.

4.3 The Rule of Law and the Significance of Ownership

Russia and most Central Asian countries define forest resources exclusively as state property. The management responsibility may be divided between different central-level state agencies, local government, and state enterprises. Albania and Tajikistan are taking initial steps in transferring the responsibility for land management to non-state parties, mainly communities. In Albania, degraded forest lands may be transferred; in Tajikistan, degraded pasturelands may be used for tree planting. In the Kyrgyz Republic and Uzbekistan, community forestry is being experimented with, so far to a rather limited extent, through long-term leases on state forestlands. This applies especially to lands given to communities for rehabilitation and protection. In Georgia, similar concepts are recognized in the law, but in practice they have not yet been applied. In Armenia, 10-year forest agreements with local communities are provided for in the Forest Code, and there is an incipient process to implement such agreements. The Balkan countries have both public (state and communal) as well as private ownership of forestlands.

The Russian government has introduced long-term forest leases with a lease period of 49 years. Detailed information on the extent of leased forest area is unavailable but it is apparently substantial. Potential risks include theft or abuse by leaseholders, but available information does not allow conclusions on whether leased forest areas differ from others with respect to their vulnerability to illegal logging.

In Albania the government is experimenting with a model in which degraded forest lands are transferred to local communities under their management. In Tajikistan, degraded pasture areas with tree-growing potential are being transferred to non-state parties. There are indications that these forest lands are somehow better protected against theft than other forest areas. The difference results probably from the fact that the community forest areas have

significant development potential for local use, which induces the population to protect them more closely. The effectiveness of this model will be truly tested once the communities get engaged independently in the management of these forests. They will then have to develop an efficient way to share costs and benefits, and to make critical choices to ensure that the resources are managed sustainably for the long term.

Privately owned forests exist at present only in the Balkans. For instance, in Serbia and Montenegro local experts assume that the largest volumes of illegal timber come from private forests (no hard data is available). 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 need to 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 amount and value of harvested firewood and timber.

4.4 Monitoring and Control Systems

An effective monitoring and control mechanism consists of several components including institutional structure, availability of resources, and efficient implementation processes. Not all components have the same importance in each particular case, but for the entire system to be effective all three components have to be in place and function adequately. Most important, any monitoring and control system can only be effective if the overall governance situation does not obstruct (favoring imprecise land tenure structures or high-level corruption, for instance) but supports such efforts. Overall, the monitoring and control systems are still weak in the countries involved in the study.

4.4.1 Conflicts of Interest within Forest-Related Administration

Under the former communist governments, the competences for both forest management and control were usually vested in the same administrative body. Following the fall of communist regimes, the idea of establishing independent control functions took hold and some forestry administrations in the region moved in this direction. In Armenia, the inspection body is in a different ministry than the state forest enterprise. In Russia, a similar arrangement has been proposed. 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, for instance, in Azerbaijan and is to be introduced in Bosnia and Herzegovina. In other ENA countries under review, controlling and monitoring competences are still vested in a single public administration. There is usually an inspection body at the ministerial level charged with controlling the state forest enterprise, but its capacity is typically quite limited.

4.4.2 Effectiveness of Control Procedures

Control procedures alone can do little to eliminate illegal logging but appropriate procedures are a prerequisite and a necessary foundation for other efforts.

Timber sales from state forests. The main weaknesses of the systems of awarding concessions and of 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. The main issues that need monitoring

and supervision for timber harvesting and sales from valid concessions are the publicity of concession contracts and the regular updating of forest inventories and management plans.

Controlling harvesting in private forests. The transparency of timber sales from private forests is only relevant to the Balkan countries. In these countries the procedures seem to be in place, but their actual implementation cannot be verified.

Controlling timber transport, processing, and export. Most countries have procedures in place for controlling the transport of timber. Despite this, massive amounts of illegal timber are being transported, which indicates that the paper-based systems used for control and verification of legality are not foolproof. There is sufficient outside interference in the system to make it nonoperational, at least in part.

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 logging volumes and areas under production.

Refinement of controlling procedures can do little in a situation where the impact of any technical improvement is effectively diluted by corruption.

4.4.3 Quality of Information Management in the Public Forest Sector

The available information on forest management and timber trade is fragmentary and inconsistent, and much of the basic data remain unprocessed. The information management systems are outdated; use of computerized systems 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. In Serbia and Montenegro, however, the forest administration maintains a reasonably well-functioning information system including some technical innovations. Russia is progressively implementing satellite detection and aerial surveillance in the struggle against illegal logging. The objective is to establish satellite detection for 100 percent of forests by 2006 from the current (2003) 60 percent coverage, providing high-resolution photographs twice per day similar to those used by the military (Illegal Logging 2005). In addition, a broad information management system is being planned.

4.4.4 Availability of Resources for Law Enforcement

The law enforcement staff generally have limited resources (such as means of transport and communication, and operational budgets) and their salaries are low. Lack of resources is a major hindrance for effective law enforcement, especially against theft and unauthorized harvesting by nonstate forest owners. However, increasing resources for transportation and communication would have little impact against corruption-related illegal logging, which often relies on data manipulation and abuse of authority (see the example given in box 4.6). For these problems, the main issue is to assess whether the available funds are spent on appropriate activities, that is, 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 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 the result of poverty (as in the Kyrgyz Republic and Moldova).

4.5 Linking the Forest Sector to the Broader Context of Good Governance

Initiating effective measures to stop illegal logging cannot be achieved through the efforts of one single sector of the public administration. What is needed is strong support of the public forest service from higher levels in the hierarchy as well as effective cooperation from other public services. There is also a need to transcend narrow approaches to controlling and monitoring based exclusively on public sector management, by establishing joint efforts and working links between the government, the private sector, the environmental NGOs, and civil society institutions. At least in some regions effective measures of control cannot be the exclusive domain of government action but need to involve the press, private enterprises, local communities, and the public in general. In Albania, for instance, the government has established a high-level task force involving representatives from several government agencies to supervise the fight against illegal logging. In the Kyrgyz Republic, a special parliamentary commission was established to investigate illegal logging of walnut trees, the most valuable forest resource in the country.

A well-functioning judiciary is an integral part of good governance. Conversely, ineffective prosecution and courts are a major bottleneck for law enforcement. Problems include the length of juridical procedures of criminal cases in overburdened courts, inconsistent prosecution, and poor preparation of law suits.

5 Framework for Action

5.1 Focusing Action

A first step in organizing strategies for improving legal compliance in the forest sector is to agree on a focused operational definition of illegal actions. This implies deciding on what forest-related actions and what legal parameters will be included. Too broad a definition of illegal logging (such as including all possible violations of laws that can take place within enterprises carrying out timber harvesting and transport) can create confusion among stakeholders, weaken the commitment of some, and make operational control difficult.

It seems evident that at a minimum, definitions should cover the basic harvesting operations as well as corruption. However, the legal structure of each country is different and therefore legal definitions will have to be tailored to each particular situation.

It may be advisable to arrive at a commonly agreed operational definition through a participatory process involving not only government specialists but also other key groups, such as industrial operators, community groups, and consumers.

5.2 Identifying Potential Measures

5.2.1 Different Contexts Require Different Corrective Measures

The causes of illegal activities in the forest sector are numerous and therefore corrective measures focusing on one or few dimensions such as improving the legal framework or the capacity of the forest police to enforce regulations will, in all probability, not produce satisfactory results. A comprehensive set of corrective activities on various fronts and adjusted to the specific conditions that may be faced in a country will have a greater chance of being effective.

Therefore, while sharing wide strategic principles, programs to control illegal logging and illegal trade need to be tailored to the socioeconomic, political, and governance situation of each country. Simply stated, there are no “magic bullets” that would solve the problems of illegal logging and illegal trade everywhere. However, there are some general strategic principles that can be applied with perhaps different intensities and different combinations of actions depending on the strength of the detected underlying causes of illegal logging and trade. These principles are discussed below.

5.2.2 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 providing checks and balances in the forest sector. Access to data and information contributes to making the actions of decision makers transparent, and facilitates other types of governance reforms by intensifying informed dialogues and stakeholder participation, 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 responsibility among forest resources managers for long-term interest in the sustainability of the resource base, and capacity to effectively control and manage these resources. Lack of effective enforcement creates a situation where state forests are de facto open access areas, where illegal logging can be practiced almost with impunity. Privatization and community ownership of forests can be one solution, as could be the involvement of a 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 for the creation of sufficient security for investment in tree planting and management of tree plantations (whether small scale or larger scale).

Development in rural areas and increasing rural incomes, and urban development resulting in migration from rural areas to urban centers for better paying employment, are critical factors in reducing the demand for fuelwood and other forest products used for subsistence consumption. Building rural infrastructure and supporting agricultural development and small-scale enterprise development can be as or more effective in improving the fuelwood

demand-supply balance as investing in tree plantations or other activities within the forest sector.

Moving toward improved governance in society as a whole is a precondition for good governance in the forest sector. Weaknesses of the judicial system are often crucial, because they permit even detected illegal loggers to go unpunished, but such problems go beyond the forest sector and need to be addressed through broader programs. Most countries have ongoing programs to address governance-related issues in 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 broader reform processes, and should also make full use of the conditions created by such reforms. The forest sector is seldom able to initiate necessary reforms because top management is often among beneficiaries of corrupt practices.

5.2.3 Improving the Demand-Supply Balance of Essential Forest Products

Subsistence use. In most of the countries involved in the study, the chronic imbalance in the legal supply and demand for fuelwood, and lack of affordable alternative sources of energy, forces the rural poor into illegality. In the long term and with the improvement of economic conditions in rural areas, and economic development in general, the demand for fuelwood is likely to decline to more sustainable levels. However, in the short term and in the absence of substantial rural development or massive migration to cities, the extraction of fuelwood—even beyond the levels estimated as sustainable—will continue. In these circumstances, measures to increase fuelwood supplies would reduce incentives for illegal logging.

Furthermore, revision of energy subsidy policies can have a major impact on illegal fuelwood consumption. This potential impact should not continue to be ignored in the design of adjustment policies by ministries of finance and by international financing institutions, as it is at present.

In the longer term the options to increase fuelwood supplies include creating the conditions for (a) ensuring the natural regeneration of forest and bush lands, and (b) intensifying farm and community level plantations. Because the effectiveness of these actions depends on land tenure arrangements and their security, it is unlikely that any significant results can be achieved in the absence of supporting reforms in land policy and legislation. Most actions of this type need fairly broad-based efforts combining the provision of inputs (seedlings, nursery materials, and so forth) for free or at subsidized prices, awareness campaigns, and other activities, 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 certain that plantations would in fact increase fuelwood supply; examples in other countries show that communities may opt for more valuable species and products that yield higher returns.

Measures 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 coherence and synergies between forest policy and energy policy is crucial to achieving a balanced and realistic approach to the future supply of rural energy. The national forest programs initiated or planned in most of the countries offer a good opportunity for this.

Commercial use. A growing imbalance in the legal supply and demand for commercial timber, combined with the high cost of imported timber is increasing the attractiveness of illegal logging in many of the countries involved in the study. In some countries with abundant forest resources, it may be possible to increase the legal allowable cut, which could also increase government revenues and thus improve capacity for law enforcement. To be effective, this strategy needs to be accompanied by measures for improved governance, especially to curb the high-level, corruption-related illegalities that can effectively block any improvements at the lower levels in controlling illegal activities in the forest areas and the supply chain.

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

5.2.4 Measures for Improved Governance in the Forest Sector

Effective control of illegal logging requires various integrated actions by the forestry administration and by other agencies of government, the public sector, and civil society acting in partnership. Furthermore, it also requires improvements to the policy and legal framework to eliminate those factors that force some actors to act illegally and to improve legal coherence.

Legal framework. The quality of the regulatory framework is key to the organization of effective strategies to control illegal logging and trade. Regulations should be limited in number, and simple. They also should be realistic, demanding feasible actions from stakeholders and forest operators, and fair in the sense that they do not violate human rights or deeply rooted customary rights.

When substantial illegal logging and trade are detected, the widely observed tendency is to regulate more rather than less, to constrain the space for illegal logging and illegal trade by increasing the number and level of detail of rules. However, this approach regularly backfires. In most countries regulations are already numerous and complex, so much so that in some cases, going around the rules is the only way to operate. Regulatory proliferation also normally leads to bureaucratic complexity. Abundance and complexity of rules also increase the opportunities for discretionary interpretation of regulations and for corrupt behavior. In fact, some regulatory systems are designed by some unscrupulous government officers to open opportunities for corruption. The multiplication of rules tends to increase the costs of compliance.

Thus, reduction in the number of rules and their simplification is an important step in combating illegal logging and illegal trade and governments genuinely interested in improving the quality of governance in the sector would do well to give priority to reforms of the sector's regulatory architecture.

Furthermore, the rather obvious concept that the law will be respected only if compliance is feasible, is frequently ignored. Requiring main actors to perform impossible tasks, such as asking small operators to produce complex and expensive forest management plans, generates strong incentives for these actors to operate illegally. Governments should therefore strive to

base their actions on regulations that are well within the capability for compliance by various stakeholders.

The regulatory framework should also avoid trampling basic human rights or ignoring customary rights. Such actions will only be perceived as unfair by negatively affected actors and will thus feed a strong resistance to complying with the law.

In many cases, laws include unrealistic penalties for those that act illegally. Ideally, penalties should be commensurate with the gravity of offenses committed and high enough to provide an effective deterrent. Further financial penalties need periodic revision to keep pace with inflation.

Forest monitoring and information systems. One of the most effective ways to reduce illegal logging and trade is to increase the general knowledge of the condition of the nation's forest resources, how they have been managed, and the consequences of illegal logging on the quality of resources, the environment, the economy, and the condition of the rural poor. Without this knowledge there is little reason for anybody to be concerned with illegal acts and it is also difficult to form coalitions of interests or to mobilize public opinion. In the absence of satisfactory information on forest resources, political leaders may not perceive illegal logging as important enough to deserve their attention and effort.

An essential element for detecting and suppressing illegal logging and trade is an adequate baseline of information to be used for monitoring the evolution of the forest; the movement of forest products; and the consistency of production, consumption, and trade data. Unfortunately, there is little systematically updated information on forest resources in the ENA countries. In Russia and most of the Caucasus and Central Asian countries, the last comprehensive forest inventories were carried out in the 1980s, before the breakup of the Soviet Union. 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 by third parties, also are recommendable.

Independent monitoring of forest concessions and logging and transport of timber is necessary, with a focus on the incidence and modalities of corrupt acts. The options include (a) strong and independent government institutions with capacity to conduct intensive financial and field audits, and (b) capable and independent 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.

Monitoring technologies that could be used widely in ENA countries are developing at a fast pace and becoming more effective, affordable, and easy to use. Modern remote sensing tools and Global Positioning Systems can provide a wealth of information on forest resources and real time information about variations in forests' condition and integrity, such as the illegal construction of roads or the occurrence of unauthorized mining operations in forest areas. Modern product-tracking technologies can help trace movement of forest products from logs to industrial processing and transportation to national or international markets.

Illegal logging that is difficult to detect at the forest can be identified at successive stages of transport, industrial processing, and trade. An efficient information system relying on sound statistics can detect how logs are processed and traded in national and international markets,

thus creating powerful deterrents for such illegal practices as false declarations of logged volumes and species.

Forest administration reform. Forest administrations in the ENA countries suffer from a number of weaknesses that create favorable conditions for the proliferation of illegal acts. First, the public forest administration seldom has a proper balance between its responsibilities and its financial and human resources and authority to properly satisfy those responsibilities. Second, there are a number of institutional difficulties in coordinating actions with related sectors and institutions, such as the judiciary, the police, conservation agencies, and so on. Third, bureaucratic procedures to obtain logging and other types of authorizations are often cumbersome and lack transparency.

Effective strategies for controlling illegal logging and trade must achieve an adequate balance between the responsibilities entrusted to the forest public administration and its financial and human resources, as well as the commensurate authority to deploy them.

The administrative procedures used in granting logging licenses have to stay in proportion to the economic value of the products. Bureaucratic procedures that are excessively cumbersome, as well as regulations that disregard basic human needs, encourage illegal activities. This is especially important for fuelwood cutting and other subsistence uses of forests, where the capacity of people involved with these activities to comply with bureaucratic requirements is extremely low. Laws and regulations need to be assessed based on implementation experience and adjusted as needed to reduce the cost of compliance.

Furthermore, a clear separation between production and monitoring of forest functions, preferably into different ministries, is a precondition for any effective system for monitoring and preventing illegal logging. However, effective strategies must rest on appropriate ways of coordinating action between these various institutions of government. 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 systems suffer from overburdened courts, inconsistent penalty codes and their application, and corruption. As a result, a major portion of those guilty of illegal logging go unpunished.

The processes used for the sale of timber and awarding of concession and logging contracts given to private companies in government forests are not yet fully transparent. Moving to a publicly transparent system of competitive bidding with clearly specified criteria as well as making the contracts public and allowing interested parties to challenge the award of such contracts can be powerful tools to enhance transparency of government operations and combat corrupt practices.

Commercial theft and unauthorized illegal logging can be fought with improved organization and increased resources, but corruption requires approaches in which improved institutional arrangements and transparency play a key role. The most damaging form of corruption involves high-level officials. The financial losses are significant. 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.

Multistakeholder governance structures. The public forest administration and other government agencies can establish associations and cooperative arrangements with other civil society and private sector institutions that can contribute to the implementation of some of the key tasks of law enforcement. Coalitions can strengthen *political determination* and *long-term commitment* to combat illegal logging and trade and can contribute to changing cultural values and the way the general public thinks about forest resources and their management. The establishment of multistakeholder 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 programs can offer such forums and provide a focus for debates on forest governance issues. In the absence of such comprehensive planning processes, thematic and more ad hoc forums could be set up, for example, to discuss and find solutions to the problem of illegal logging. In addition to interministerial task forces or committees set up in some of the countries, parliamentary committees could help increase the political profile and status given to forest governance issues.

Various independent NGOs have proven effective in monitoring forest activities and identifying illegal logging. Independent certification could be a powerful tool for improved forest governance and control of illegal logging in exporting countries or countries that could be exporting wood products to the European and other more discriminating markets. While independent certification is not greatly effective for countries that have limited or nonexisting exports, or in cases where exports can be easily diverted to less environmentally sensitive countries, certification is nevertheless one of the many mechanisms that can contribute to ensuring a greater degree of legality in the forest sector.

Furthermore, in various cases governments can promote the adoption of corporate codes of conduct by key corporations engaged in processing and trade of forest products. By adopting codes of conduct corporations either independently or as members of industry associations commit themselves to following certain principles of responsible operations, including compliance with the laws of the countries in which they operate. Responsible corporations and industry associations are voluntarily organizing such initiatives.

These coalitions are not easy to form and sustain. Those that are more stable focus on causes of illegal logging and trade rather than on issues, stress cooperation rather than confrontation, and strive to avoid antagonizing the political regime of the country. They also aim at incremental change rather than drastic reforms (Kpundeh and Johnston 2001). In practice this translates into a focus on positive incentives to fight illegal logging and trade rather than on imposing top-down, government-inspired command-and-control measures that are difficult to monitor and enforce.

5.3 Developing Strategies for Specific Contexts

For general remedial measures to be effective, they must be prioritized and, in some cases, implemented in strict sequence. Priority measures depend on the context defined mainly by 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.

In ENA countries, there are three typical contexts of illegal logging requiring different approaches:

- *Context:* Top officials in the forest administration or at higher levels of government abuse their authority to enable large-scale commercial illegal logging. Petty corruption involving officials at lower levels of forest administration reinforce this trend. Often, illegal logging results in total harvested volumes exceeding sustainable levels. Monitoring and enforcement systems are weak, focused on theft, and unable to eliminate corruption.

Recommended approach: For illegal commercial logging, the most effective responses are likely to be, in countries with the most difficult overall governance situation, on tackling high-level corruption that allows the perpetrators to circumvent lower level actions for control. The tools include increasing the transparency of activities in the forest sector through the provision of independent information, strengthening civil-society participation, and promoting elements of good governance in general. The forest sector is usually unable to solve the problem on its own; instead, it must benefit from cooperation with related government sectors (for example, the police and the courts) as well as from the highest levels of government and public administration.

It is stressed that most of the potential measures will be fully effective **only if** corruption, especially at the high level, is brought under control; otherwise there is a risk that resources will be used ineffectively and serve only as window dressing. In particular, one should be careful not to focus on petty corruption, thereby diverting attention from the battle against high-level corruption.

The appropriate mix of other measures depends on the country but improving monitoring and information systems, eliminating conflicts of interest in the structure of forest administration, and strengthening law enforcement are generally necessary.

- *Context:* Poor people suffer from an inadequate wood supply, mainly fuelwood, and resort to illegal harvest to meet their basic needs. Law enforcement does not have, nor can it be expected to have, the capacity to eliminate this type of illegal logging.

Recommended approach: The strategies to counteract poverty-driven illegal harvest are less dependent on the institutional structure than on policies and legal norms. The institutional setup has little relevance in a situation in which policies are flawed to such an 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 and, as a result, the legal supply of fuelwood is often grossly inadequate to satisfy people's basic needs.

The 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: (a) decrease demand by providing alternative sources of energy at low or no cost for the rural poor, and (b) increase supply by legalizing currently illegal fuelwood cutting, by amending the legislation, and by considerably increasing the allowable cut over current levels.

- *Context (applies to the Balkans):* Small, privately owned woodlots are being pillaged by theft committed by outsiders, or woodlot owners themselves fail to comply with forest management regulations. Woodlots are too small and scattered to be effectively guarded by law enforcement staff. Forest owners themselves live far from the plots, and have limited interest in their management.

Recommended approach: In private woodlots, illegality often results from failing to follow the administrative procedures, not the forest management regulations themselves. The bureaucratic burden should be reduced to be in line with the value of economic benefits, true environmental risk, and enforcement capacity. For instance, for very small woodlots, the requirement to apply for a harvesting license beforehand could be changed to notification after harvesting.

To better contain the threat from theft, forest owners could be encouraged and supported to participate in surveillance activities. In some Eastern European countries, private forest owners have shown interest in forming patrols to detect illegal activities and bring them to the attention of law enforcement staff. More systematic control procedures by the regular law enforcement agencies could also improve the situation.