

Poverty and forestry

A case study of Kyrgyzstan with reference to other countries in West and Central Asia



R.J. Fisher, Kaspar Schmidt, Brieke Steenhof and Nurlan Akenshaev

May 2004



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Livelihood Support Programme (LSP)

An inter-departmental programme for improving support for enhancing livelihoods of the rural poor.

Poverty and forestry

A case study of Kyrgyzstan with reference to other countries in West and Central Asia

**R.J. Fisher, Kaspar Schmidt, Brieke Steenhof
and Nurlan Akenshaev**

May 2004

Cover photograph by Kaspar Schmidt

This paper was prepared under contract with the Food and Agriculture Organization of the United Nations (FAO). The positions and opinions presented are those of the authors alone, and are not intended to represent the views of FAO.

The Livelihood Support Programme

The Livelihood Support Programme (LSP) evolved from the belief that FAO could have a greater impact on reducing poverty and food insecurity, if its wealth of talent and experience were integrated into a more flexible and demand-responsive team approach.

The LSP, which is executed by FAO with funding provided by DfID, works through teams of FAO staff members who are attracted to specific themes being worked on in a sustainable livelihoods context. These cross-departmental and cross-disciplinary teams act to integrate sustainable livelihoods principles in FAO's work, at headquarters and in the field. These approaches build on experiences within FAO and other development agencies.

The programme is functioning as a testing ground for both team approaches and sustainable livelihoods principles.

Email: lsp@fao.org

Access to natural resources sub-programme

Access by the poor to natural resources (land, forests, water, fisheries, pastures, etc.), is essential for sustainable poverty reduction. The livelihoods of rural people without access, or with very limited access to natural resources are vulnerable because they have difficulty in obtaining food, accumulating other assets, and recuperating after natural or market shocks or misfortunes.

The main goal of this sub-programme is to build stakeholder capacity to improve poor people's access to natural resources through the application of sustainable livelihood approaches. The sub-programme is working in the following thematic areas:

1. *Sustainable livelihood approaches in the context of access to different natural resources*
2. *Access to natural resources and making rights real*
3. *Livelihoods and access to natural resources in a rapidly changing world*

This paper contributes to the first thematic area by using a case study of Kyrgyzstan to show how access to forests in West and Central Asia can contribute to poverty reduction through sustainable livelihood approaches. The study supports FAO's Forestry Outlook Study which aims to better understand the dynamics and relationships between societies and nature and particularly the role of the forestry sector in socio-economic development.

TABLE OF CONTENTS

GLOSSARY	v
1. INTRODUCTION	1
2. FOREST, LIVELIHOODS AND POVERTY LINKAGES	2
3. BACKGROUND TO KYRGYZSTAN.....	5
3.1 Geography	5
3.2 Population and migration	6
3.3 History.....	7
3.4 Government system.....	7
3.5 Economy	8
4. POVERTY IN KYRGYZSTAN.....	10
5. FORESTS AND THE FOREST SECTOR IN KYRGYZSTAN	13
5.1 Area and types of forest	13
5.2 Forest sector institutional arrangements.....	14
5.3 Forest tenure and access.....	17
5.4 Collaborative Forest Management	17
6. POVERTY AND THE FOREST SECTOR.....	21
6.1 Introduction	21
6.2 Relationships between human settlements and forests	21
6.3 Walnut-fruit forests	22
The Walnut-fruit forests, livelihoods and income	22
Potential of CFM for poverty reduction in walnut-fruit forests	22
Limitations of CFM as practiced, for poverty reduction.....	24
CFM Boards and Commissions – Checks and balances	27
6.4 Poplar plantations.....	28
6.5 Riverside forests.....	28
6.6 Juniper forests	29
6.7 Spruce forests	30
7. CONSTRAINTS AND OPPORTUNITIES FOR POVERTY REDUCTION AND FORESTS IN KYRGYZSTAN	31
8. OTHER COUNTRIES IN THE REGION.....	35
8.1 Forest resources in West and Central Asia.....	35
8.2 Nature of forests	37
8.3 Role and state of forests	38
8.4 Forests, forest policy and poverty	39
8.5 Forest resources in national poverty reduction strategies	40
8.6 Concluding remarks on the West and Central Asia Region.....	41

9. CONCLUSIONS	43
REFERENCES	45
NOTE ON SOURCES OF INFORMATION.....	50
ACKNOWLEDGEMENTS	50
ABOUT THE AUTHORS.....	51

GLOSSARY

<i>Ail Okmot</i>	Village administration, perhaps best translated as municipality as it often consists of more than one village.
<i>Aksakal</i>	Village elder
Arabian Peninsula	The territories of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates and Yemen. The Arabian Peninsula is seen as a subregion of West Asia (see below).
Caucasus	Refers to the territories of Armenia, Azerbaijan and Georgia. The Caucasus is seen as a subregion of West Asia (see below).
Central Asia	Defined for the purpose of this paper as the area covered by Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. All these countries are former Soviet republics and members of the CIS.
CIS	Commonwealth of Independent States
CFM	Collaborative Forest Management
Forest Range	Territorial sub-unit of <i>leshoz</i>
Goslesfund	State Forest Land or “State Forest Estate comprising forests and non-forested areas, the latter also destined for forestry use in the long-term, under control by SFS”
IMF	International Monetary Fund
<i>Jailoo</i>	Summer pastures
<i>Kolhoz</i>	Cooperative agricultural farm during Soviet period
KIRFOR	Kyrgyz-Swiss Forestry Support Programme
<i>Leshoz</i>	State Forest Farm (often translated as State Forest Enterprise). A form of decentralised Forest Administration managing an area of forest. State Forest Cooperative during Soviet period - a territory with a resident population.
NTFP	Non-Timber Forest Product, including fuelwood
Oblast	Province/Provincial administrative body (sometimes translated as Region)
PRSP	Poverty Reduction Strategy Paper
Rayon	District/District administrative body
SDC	Swiss Agency for Development and Cooperation

SFS	State Forest Service
<i>Sovhoz</i>	State agricultural farm during Soviet period
West Asia	The region comprising the following countries and areas: Afghanistan, Armenia, Azerbaijan, Bahrain, Cyprus, Gaza Strip, Georgia, Iraq, Islamic Republic of Iran, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates, Uzbekistan, West Bank and Yemen.

1. INTRODUCTION

Typically forests cover a relatively small proportion of each of the countries of West and Central Asia. Nevertheless they are very valuable in biodiversity terms and as economic resources for the states in the region. Historically they have also been very important to the livelihoods of the rural people who live in and around them. It is also clear, at least in many countries of the region, that they have the potential to contribute to poverty reduction through sustainable livelihood approaches.

In order to enable this to happen, there is a need to develop new approaches and institutional arrangements which improve access to forest resources by the poor. There have been a number of attempts to implement various collaborative and participatory approaches to forest management which have potential implications for achieving this. However, institutional change of this type has not proved to be easy.

This paper examines the existing and potential connections between rural people and forests in the Kyrgyz Republic, with the aim of developing an improved understanding of the role and potential role of the forestry sector in poverty reduction.¹ While the paper focuses on Kyrgyzstan, the wider aim is to show, building on some of the experiences of Kyrgyzstan, how the connections between forests and poverty reduction might be explored in West and Central Asia more generally. In order to identify some possible similarities, the Section 8 briefly explores the situation in other parts of West and Central Asia.

Kyrgyzstan has been selected for a number of reasons. The main reasons are that it has a high level of poverty and the rural population is heavily dependent on agriculture (and therefore natural resources) for its livelihoods. Further, the government has experimented with, and increasingly accepted, a programme² of Collaborative Forest Management as a central platform in forest policy. Experiences in implementing this programme provide useful insights for other countries in the wider region, particularly for other countries from the former Soviet Union.

¹ An earlier World Bank study (Brylski et al. 2001) aimed “to identify opportunities for improving pasture and forest management to contribute both to poverty reduction and increased living standards, and to improve management and protection of upper watersheds”. The current paper differs in that it is not focused on mountain areas and in its emphasis on discussion of the CFM programme.

² The introduction and development of CFM has been supported by the Kyrgyz-Swiss Forestry Support Programme as a project. However it has been adopted more widely by the Kyrgyz government and is now supported by a legal decree. In this paper we refer to this broadly supported activity as a “programme”.

2. FOREST, LIVELIHOODS AND POVERTY LINKAGES

In recent years there has been extensive discussion of the linkages between forests, livelihoods and poverty. It is not appropriate to present a detailed discussion of the literature here, but it is useful to make a number of general points.

It is clear that rural people in many parts of the world (and certainly in countries of West and Central Asia) make extensive use of forests as part of their livelihood systems. There are many aspects of this use including direct consumption of forest products and services (foods, timber for construction, fuelwood, fodder for livestock, water, forest farming), collection of forest products for sale (hunting, NTFP collection etc) and the use of forest products for food security in times of seasonal shortages, drought and economic stress. The extent of use and level of “dependence” is highly variable. Nevertheless forests are often of great importance in these ways.

In addition to the use of forest products for livelihood support and risk management, forests are potentially valuable to rural people as a means of income generation and, thus, poverty reduction.

The problem with forest resources in both of these contexts is that forest resources are frequently under the official control of state forest agencies which generally restrict the use of forests by rural people, particularly where serious income generation is concerned. Thus, the potential for forests to contribute to poverty reduction usually involves questions of tenure, access and benefit-sharing between the state (owner) and forest users.

This paper considers both the livelihood maintenance and poverty reduction potentials of forests in Kyrgyzstan.

Discussion of forests and poverty reduction takes place in the context of a great deal of international policy emphasis on attempts to achieve poverty reduction through sustainable forest management at a time when many projects and programmes attempt to integrate forest conservation and development/poverty reduction. There has been some scepticism about this approach. Wunder (2001) argues that the potential for forest led poverty reduction is limited due to issues such as the capital intensive nature of forest industry. (He focuses on tropical forests, but the point may be more broadly applicable.) He also seems to accept the status quo in terms of the absence of rights of people to forest resources as a constraint, rather than identifying it as the key issue to be addressed.

Fisher (2000), in a review of activities (programmes and projects) which consciously aim to combine forest conservation and poverty reduction objectives in Asia, finds that the performance in terms of poverty reduction has been very poor. While there are many claims that people have benefited from such projects, there is very little in the way of attempts to take into account the costs of conservation measures to rural people. Generally only benefits are considered. Limited access to and control over resources are identified as the key issue to be addressed.

As Dubois (2002) points out: “Timber production attracts powerful ‘outside’ interests, and therefore requires sufficient bargaining power; which the poor often lack.”

There are many different ways of defining poverty. Some definitions revolve around assets or absolute income levels. Recent World Bank thinking (World Bank 2000/2001) sees poverty in terms of three dimensions: opportunities for growth, empowerment and security. The World Bank Strategy for reducing poverty is based on addressing each of these three dimensions (see Box 1). This approach seems to have been fairly widely accepted and is, in fact, essentially consistent with DFID’s sustainable livelihoods approach. SDC defines poverty in multidimensional terms, placing some emphasis on powerlessness (see Box 2). In this paper we see poverty reduction essentially in terms of the World Bank’s three dimensions.

Box 1: Strategy for Addressing the Three Dimensions of Poverty

[Extracted from World Bank 2000/2001]

Promoting opportunity. Poor people consistently emphasize the centrality of material opportunities. This means jobs, credit, roads, electricity, markets for their produce, and the schools, water, sanitation, and health services that underpin the health and skills essential for work. Overall economic growth is crucial for generating opportunity. So is the pattern or quality of growth. Market reforms can be central in expanding opportunities for poor people, but reforms need to reflect local institutional and structural conditions. And mechanisms need to be in place to create new opportunities and compensate the potential losers in transitions. In societies with high inequality, greater equity is particularly important for rapid progress in reducing poverty. This requires action by the state to support the buildup of human, land, and infrastructure assets that poor people own or to which they have access.

Facilitating empowerment. The choice and implementation of public actions that are responsive to the needs of poor people depend on the interaction of political, social, and other institutional processes. Access to market opportunities and to public sector services is often strongly influenced by state and social institutions, which must be responsive and accountable to poor people. Achieving access, responsibility, and accountability is intrinsically political and requires active collaboration among poor people, the middle class, and other groups in society. Active collaboration can be greatly facilitated by changes in governance that make public administration, legal institutions, and public service delivery more efficient and accountable to all citizens—and by strengthening the participation of poor people in political processes and local decisionmaking. Also important is removing the social and institutional barriers that result from distinctions of gender, ethnicity, and social status. Sound and responsive institutions are not only important to benefit the poor but are also fundamental to the overall growth process.

Enhancing security. Reducing vulnerability—to economic shocks, natural disasters, ill health, disability, and personal violence—is an intrinsic part of enhancing well-being and encourages investment in human capital and in higher-risk, higher-return activities. This requires effective national action to manage the risk of economywide shocks and effective mechanisms to reduce the risks faced by poor people, including health- and weather-related risks. It also requires building the assets of poor people, diversifying household activities, and providing a range of insurance mechanisms to cope with adverse shocks— from public work to stay-in-school programmes and health insurance.

Box 2: SDC's view of poverty.

The SDC's comprehensive understanding of poverty takes into consideration the multidimensionality, subjectivity, relativity and dynamics of the topic. Besides income, a multidimensional understanding also includes dimensions such as security, vulnerability, powerlessness and other circumstances that characterise poverty. Those actually affected by poverty determine the dimensions and value of their lives. Hence the value system of those affected significantly influences their concept of poverty. Values are subjective, individual and collective factors. With its understanding of the subjectivity of poverty, SDC respects the principle of the individual's right to self-determination of his or her welfare, culture and hence cultural diversity. Since the dimension of relativity takes account of uneven distribution, it also incorporates issues of disparity and equity in the concept of poverty. Finally, SDC also gives careful consideration to the dynamics of poverty: poverty occurs in an environment dominated by interrelationships. This viewpoint includes the question of power and is essential in terms of fighting the causes of poverty.

Source: SDC (2000)

3. BACKGROUND TO KYRGYZSTAN

3.1 Geography

Kyrgyzstan is a small, landlocked, mountainous country in the very centre of Central Asia with an ethnically mixed population of roughly 5 million people (see Table 1 for characteristics of the country and its economy). Bishkek is the capital and largest city. Kyrgyzstan borders China to the east and the former Soviet republics Kazakhstan to the north, Uzbekistan to the west and Tajikistan to the south-west. The Kyrgyz Republic became independent in August 1991 and joined the Community of Independent States (CIS) in December of the same year. Since then the country has gone through a difficult phase of economic, social and political transition. Categorized as a “low-income country” by the World Bank (World Bank 2002), it is considered to be the second poorest ex-Soviet republic after Tajikistan.

Table 1: Key characteristics of the Kyrgyz Republic

Territory ¹	199,900 km ²
Population (2002) ¹	5 million
Population growth ¹	0.98% (2001) 0.96% (2002)
Rural population Urban population (2001) ²	65.1% 34.9%
Ethnic composition population (2003) ³	Kyrgyz 66.9% Russian 10.7% Uzbek 14.1% Ukrainians 0.8% Germans 0.3% Tatars 0.8% others 6.4%
GDP (current US\$) ¹	1.53 billion (2001) 1.63 billion (2002)
GDP growth (% change to previous period) ⁴	1982-92: 1.3 1992-2002: 0.7 2001 5.3 2002: -0.5
GDP per capita ³	309 US \$ (2001) 322 US \$ (2002)
Real GDP per capita (PPP – purchase power parity, 2001) ³	2634 US \$
GNI, Atlas method (current US\$) ¹	1.38 billion US \$ (2001) 1.45 billion US \$ (2002)
GNI per capita, Atlas method (current US\$) ¹	280 US \$ (2001) 290 US \$ (2002)
Male life expectancy at birth Female life expectancy at birth (2001) ³	65.0 y 72.6 y
Infant mortality, per 1000 live births (2001) ¹	52.0
Adult literacy rate (2001) ²	98.7%
Population per doctor (2001) ²	355 persons

Sources: ¹ (World Bank 2003c), ² (UNDP 2002), ³ (UN 2003a, p. 39), ⁴ (World Bank 2003b)



Map from the Perry-Castañeda Library Map Collection
http://www.lib.utexas.edu/maps/cia03/kyrgyzstan_sm03.gif

The relief of the country is dominated by the ranges of the Tien Shan massif which passes into the Pamir in the very south. Nearly 90 percent of the total territory of Kyrgyzstan lies in altitudes of 1,500 m.a.s.l. and higher (Abdymomunov 2001a) and more than 40 percent of the whole territory lies above 3,000 m.a.s.l. (von Maydell 1983). Only about 7 percent of the total area is suitable for arable agriculture. Kyrgyzstan has a continental climate with considerable variations between the regions.

Thanks to its mountains, Kyrgyzstan is rich in water resources which are crucial for agricultural irrigation and which are also used to produce hydroelectric power. It also has significant deposits of gold and rare metals, minor deposits of coal and natural gas, which are being exploited, and deposits of other mineral resources such as mercury, lead, and zinc. Kyrgyzstan relies on imports of mineral fuel, but is a net exporter of electricity.

3.2 Population and migration

The population of the country is composed of more than 60 ethnic groups with Kyrgyz, Uzbek and Russians making up more than 90 percent of the total population (see Table 1 above) (UN 2003a, p. 39). Kyrgyz and Uzbek are Turkic ethnic groups, Sunni Muslim and speak related Turkic tongues. Traditionally the Kyrgyz lived as nomadic herdsman and horsemen, while the Uzbek have a sedentary tradition. The vast majority of Uzbek in Kyrgyzstan live in the lower parts of the fertile Fergana valley in the south of the country.

In demographic terms, the population of the Kyrgyz Republic is young. Children and teenagers (age 0-15) comprised 38.1 percent of the population in 1999 (National Statistical Committee 1999). Due to topographic conditions the majority of the population is concentrated in the south of the country. More than half the population lives in the densely populated Fergana Valley.

The ethnic composition of the population has changed considerably over the past decades. The emigration of Russians and other Slavic nationalities, which began in the late 1980s (Heleniak 1997), increased dramatically in the early 1990s at the height of the economic crisis to reach its peak in 1993 (UN 2003a, p. 40). The German population has experienced a mass exodus.

Internal, mainly economically motivated, migration processes have been characterised by a few city centres attracting people from all over the country and a constant outflow of migrants from all oblasts to the capital Bishkek and the surrounding Chui Oblast. This has aggravated social problems in cities, in particular in Bishkek with its already overstretched infrastructure (UN 2003a, p. 9, 25 and 65). Temporary labour migration to other CIS countries, especially to Russia, has considerably increased since independence. Such migrants are typically young people leaving to make a living abroad and to support their families back home with transfer payments.

3.3 History

For many centuries the territory of today's Kyrgyzstan was part of larger, ever changing political entities. The Kyrgyz were organized in changing confederations of clans, nominally under the suzerainty of different rulers and successive overlords. The affiliation to traditional clan or tribal groups still plays an important role amongst ethnic Kyrgyz today. From the middle of the nineteenth century the Russians gained influence in the Tien Shan. In 1876 the Khanate of Kokand, the last independent Khanate controlling the area of today's Kyrgyzstan, fell to the Russian Tsar (Choukourov and Choukourov 1994, p. 200). After the Bolshevik Revolution of 1917 and the following civil war Kirghizia, as it was known at the time, was included within the various territorial entities of the Soviet Union. It became a Soviet Republic in 1936 within its present borders.

During the early years of the Soviet era rapid progress was made in the fields of economy and education, reflected, for example, in quickly rising literacy rates (Pomfret 1995, p. 106). The agricultural collectivization in the early 1930s met strong resistance but was enforced upon the rural communities by the Soviet leaders. Industrial development was mainly pushed during the post-war period, but agriculture remained the backbone of the economy (Pomfret 1995, p. 108). It is widely acknowledged that, on the whole, living standards improved during the Soviet rule and that the country took many important development steps characterised by the progress made in key areas such as agriculture, education, health or industrial development.

3.4 Government system

Kyrgyzstan is a presidential republic with a strong executive, comprising the president and the government, and a parliament due to be changed from a two chamber to a one

chamber system. The Constitutional Court, the Supreme Court and other court bodies comprise the judiciary. Ministries and a powerful presidential apparatus form the administration. The President, who is elected by the citizens for a period of five years, appoints the Prime Minister and the other members of the government upon recommendation of the Prime Minister. Members of the parliament are elected for five-year terms in popular elections.

Administratively the country is organized in seven provinces (Russian: *Oblast*) and the capital Bishkek. The provinces are further divided into districts (Russian: *Rayon*) including, besides the district's centre, towns and municipalities (Kyrgyz: *Ail Okmot*). These municipalities typically comprise several villages and hamlets. Provinces, the capital Bishkek, districts and municipalities are governed by the head of the state administration at the appropriate level and have their own self-government assemblies (Kyrgyz: *Kenesh*). On the local level, there are usually additional, informal as well as legally formalised institutions, such as village heads, elders' councils and courts and women's and youth councils, concerned with customary and written laws, local social problems and conflicts. Governors of oblasts and heads of district administrations are appointed by the president with agreement of the respective assemblies (Matsuzato 2001), whereas heads of municipalities, villages and members of the assemblies on all levels are elected in direct elections.

3.5 Economy

The breakdown of the Soviet Union's integrated economy and the sudden stop of direct and indirect subsidies from the central Soviet budget had dramatic consequences for all sectors of the economy in newly independent Kyrgyzstan. The country embarked early on what is seen as the most ambitious economic reform programme among the former Soviet republics in Central Asia, including price liberalization, privatization, agricultural and land reforms, and an early introduction of its own currency, and gained considerable support for its determined reform agenda from the international community.

During the first years of independence, from 1991 until 1995, the country experienced drastic reductions in output and income in all sectors of the economy. Hyperinflation and rising unemployment led to a dramatic increase in poverty and inequality. The industrial sector virtually collapsed and agriculture again became the dominant sector in the early 1990s. After a first macroeconomic stabilization the country's economy recovered from 1996 until 1998. However, this recovery was mainly based on growth in a few sectors (notably agriculture, gold mining and energy). High budget and balance of payment deficits made the economy extremely vulnerable (World Bank 2001b, p 11). In late 1998 the country slid into a financial crisis mainly triggered by the Russian rouble crisis, from which it recovered only in 2000 when economic growth resumed. It is estimated that in 2002 GDP reached about 70 percent of its level in 1990 (UN 2003b, p. 11). So, after a sharp post-Soviet dip the Kyrgyz economy is now on the path of recovery and growth whilst still being fragile and prone to external shocks.

Today, the agricultural sector still plays a key role in Kyrgyzstan's economy. In 2002 it was responsible for more than one-third of GDP and employed half of the economically active population. Industry accounts for approximately 20 percent of

GDP, but is less significant in terms of employment. The importance of trade, transport and services for the economic performance and employment has considerably grown since the mid 1990s to the level of about one third of GDP generated in this sector (UN 2003a, p. 41; World Bank 2003c). It has to be stressed that within the country there are important regional economic disparities between economically more dynamic regions, such as the capital Bishkek and its surroundings in the north of the country, and remote rural regions mainly in the south and in the centre of the country. Rural areas have often relapsed into subsistence agriculture and a non-cash economy. Furthermore, it is important to note that the informal sector, not included in official statistical data, plays an important role in the country.

Despite some success of the reforms, the Kyrgyz economy still faces a number of crucial challenges, including diversifying its economy, reducing the heavy burden of external debt, strengthening governance, expanding exports, increasing investments, developing small and medium businesses and agriculture (UN 2003a; World Bank 2003a), the latter in particular in marginalized rural areas.

4. POVERTY IN KYRGYZSTAN

According to the Kyrgyz Republic's Poverty Reduction Strategy Paper (Kyrgyz Republic 2003), the incidence of poverty was 55.3 percent of the population in 1999 including over 23 percent in extreme poverty. By 2001 this had reduced somewhat – with less than 50 percent classified as poor and 13 percent as extremely poor. Poverty is greater in rural areas. For example in Jalal-Abad Oblast (in southern Kyrgyzstan), 55 percent of the population was classified as poor in 2001 and per capita annual income was 3,854 soms³, only 37.4 percent of the national average (Kyrgyz Republic 2003).

The poverty reduction strategy focuses on privatization, governance reform and macroeconomic performance. Interestingly the interim PRSP of 2001 (Kyrgyz Republic 2001) referred to “pro-poor growth” as a major strategy. The PRSP 2003-2005 refers to “sustainable growth”. Neither document makes any substantial reference to forests or environment. There are references in the PRSP 2003-2005 (Kyrgyz Republic 2003) to the potential of forests for ecotourism and creating a favourable environment for investors in forest product processing industries.

In order to get a picture of rural poverty it is worth looking at what happens at the Ail Okmot level. Each Ail Okmot collects data on the poverty/wealth situation of its inhabitants twice each year (in January and July). The data set is called the “poverty card”. It indicates how many households are categorised as very poor (income 0-140 som), a second category of very poor (141-400 som) or poor (401-600 som). Households that are perceived to be in these categories are visited individually by a staff member of the Ail Okmot, and asked about their income. The definition of income is not further specified, but can most likely be understood as how much cash is available per month. The amounts refer to the total family income, irrespective of the number of members. For 2004, the government has developed a new format for more systematic collection of data. It remains to be seen if the information will become more reliable, as the level of detail is very high, and none of the Ail Okmots has a computer to store the data of the hundreds of poor families.

Table 2 shows some data from four Ail Okmots in the southern province of Jalal-Abad, where livelihoods are strongly interlinked with the nearby forests. Some of the settlements are completely surrounded by forests, others are at the edges of the forest.

Table 2: Summarised poverty data of four Ail Okmots (Jan. 2004), data supplied by Ail Okmot offices in personal interviews with Brieke Steenhof.

Ail Okmot	# settlements	House holds	persons	Very poor (%)	Poor (%)	Total (%)	Data 2003
Kara Alma	3	562	2900	29	20	49	57
Kyzyl Ungur	5	773	3574	23,5	14,3	37,8	n.a
Arslanbob	5	2998	15607	34	10	44	51,5
Kaba	8	1725	8042	n.a	n.a	42	n.a

³ In 2001 one USD was approximately equal to 47 soms, in early 2004 one USD was equal to about 42 soms.

One difficulty in assessing rural poverty is that most families, including wealthy families are able to obtain most of their food either through self-production or barter. Even comparatively well-paid city people often obtain food produced on farms from relatives in rural areas. Cash income does not adequately reflect this fact and other criteria for wealth and poverty may be more meaningful.

The Research Group associated with the Kyrgyz-Swiss Forestry Programme's CFM Project carried out a series of wealth ranking exercises in several leshozes (state forest farms) in rural southern Kyrgyzstan. In these exercises local informants were asked to describe the criteria they would use to classify households in their village in terms of wealth and poverty. There was naturally some variation in the criteria used from site to site, but it is possible to present a generalized picture (see Table 3).

Table 3: Generalized summary of criteria used in local wealth ranking exercises (based on work by Kaspar Schmidt and Nurlan Akenshaev)

A poor family (household)

- has typically no livestock.
- has only very limited, often not very productive land resources (non-irrigated, land on slopes, etc.) within its farming system.
- has no other sources of revenue than agriculture and collection of forest products, adults are unemployed.
- is vulnerable to externally induced shocks (eg. low agricultural yield following bad weather conditions) due to a poorly diversified farming system.
- has many children.
- depends often on support from other households, since the household's revenues do not allow to sustain a living.
- is poorly dressed.
- lives on a very basic diet, in difficult times mainly consisting of bread, tea and possibly potatoes.
- is chronically short of cash.
- has difficulties to meet the expected contributions to traditional social events, but often makes these contributions despite the expenses involved in order to remain in the local social network.
- lives in poor housing conditions: old small houses built of clay, without insulation, poor heating; poor families often have no house of their own and are forced to rent a house.

A wealthy family (household)

- has a considerable number of livestock and is therefore able to generate cash at any time of the year.
- has a diversified farming system and additional, non-agricultural sources of revenues.
- is able to manage agricultural work according to a plan and priorities drawing on its own resources and, if needed, additional contracted labour force and hired machinery.
- sends children to study at the university.
- has often a private car and/or farming machinery on its own
- lives in its own well maintained, spacious house; often, these houses are built of baked bricks and not of clay.

In terms of strategies for poverty reduction, Ail Okmots have not many suggestions beyond supporting families through donations of cash (100, 200 som) on the occasion of a festival, waiving lease payments for the use of arable fields, or donation of a lamb or sheep for starting a herd. Reduced tariffs for grazing rights do not contribute to poverty reduction as the poor hardly own livestock. In two very serious cases the Ail Okmot of Kara Alma claims to have build simple houses for very poor families. Long-term strategies mainly focus on potential of establishing relations with donor organizations for building factories (such as fruit processing plants). Ail Okmots see solutions in job-creation, but have neither initiatives, ideas nor means to start by themselves. This is not particularly surprising as Ail Okmot staff in general has not been trained in identifying or creating economic opportunities. Improvement of forest management is not cited as an income generating possibility, and encouraging the poor families to become involved in CFM is not yet conceived as within the range of authorities of the Ail Okmot.

5. FORESTS AND THE FOREST SECTOR IN KYRGYZSTAN

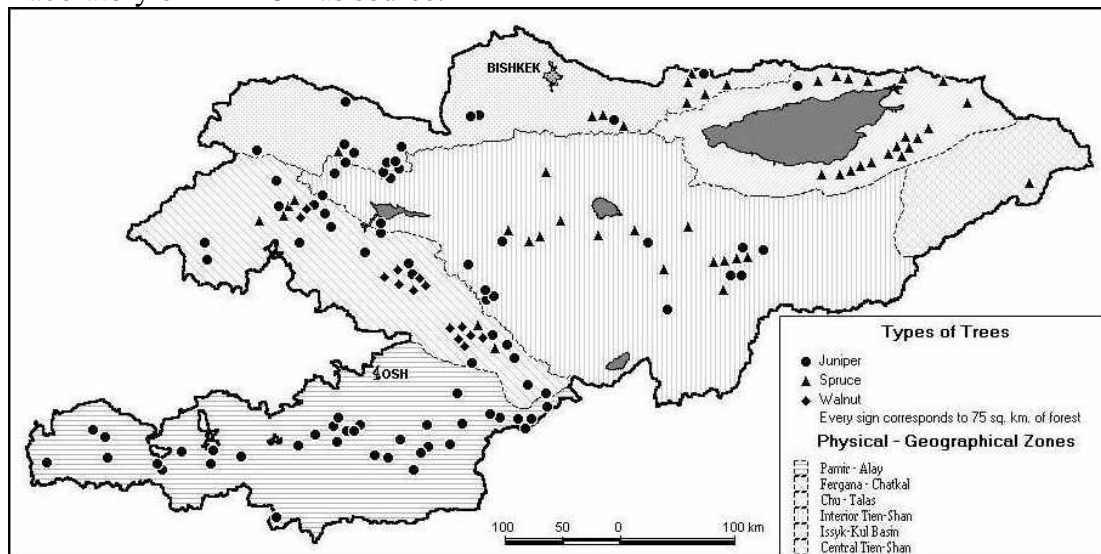
5.1 Area and types of forest

In ecological terms, Kyrgyzstan is a very rich country. It is estimated that the current forest cover is somewhere in the order of four percent of the total territory of the country or between 700,000 and 800,000 ha in absolute terms. Kyrgyz forests, which are all state owned, are very limited in area, but highly diverse. They can be grouped in four main types (Müller and Venglovsky 1998; Venglovsky 1998; Cornet and Rajapbaev 2004):

- Spruce forests (*Picea schrenkiana* Fisch. et May.) occur in the west, in the centre of the country and in the higher parts of the ranges north of the Fergana valley, mainly in altitudes between 1,700 and 3,000 m.a.s.l. Small areas of stands with the endemic Semenov fir (*Abies semenovii* B. Fedtsch.) can be found in the very west of the country.
- Walnut-fruit forests occupying the northern and north-eastern slopes of the Fergana valley. Under this term, a range of forest ecosystems dominated by fruit bearing woody species is subsumed, including walnut (*Juglans regia* L.), apple (*Malus* spp.), hawthorn (*Crataegus* spp.), plumb (*Prunus* spp.), rose species (*Rosa* spp.) almond (*Prunus amygdalus* Stokes) and pistachio (*Pistacia vera* L.). Forest stands of walnut and its accompanying species grow in the valleys and hills in altitudes between 800 and 2,400 m.a.s.l., whereas pistachio forests and almond stands grow in dryer, lower parts of the hills. The walnut-fruit forests of Kyrgyzstan are considered to be the biggest remaining areas of this particular forest type worldwide and therefore to be of global significance for biodiversity conservation.
- Juniper forests (*Juniperus* spp.) grow under arid conditions or in very high altitudes up to 3,500 m.a.s.l. in the very south of the country and dispersed over the country. These forests are typically open stands, formed by tree and crawling forms of Juniper.
- Riverside forests can be found in all parts of the country along streams and rivers, typically with species from the genera willow (*Salix*), poplar (*Populus*), birch (*Betula*) and tamarix (*Tamarix*), sometimes also with sea buckthorn (*Hippophae rhamnoides* L.).

Apart from natural forests of the above types, there are also plantations, chiefly of two kinds. Firstly, plantations of naturally occurring as well as introduced tree species within the area of natural distribution of the described forest types, and secondly, plantations of poplar near or within settled areas for the purpose of timber production for construction and as windbreaks.

Map: *Forests in Kyrgyzstan*. Source: taken from a draft of: Scheuber, M., Müller, U. and Köhl, M. (2000): Wald und Forstwirtschaft Kirgistans. Schweiz. Zeitschrift für Forstwesen. 151(3): 69-74. (Swiss Forestry Journal). The authors give the GIS Laboratory of KIRFOR as source.



Over the centuries the area of today's Kyrgyzstan has lost much of its original forest cover, in particular during the twentieth century. It is estimated that in the 1930s the Republic's forest cover was still around 7 percent (Gan 1982), but subsequent massive overexploitations during the Second World War and unsustainable land use caused a rapid decline in forest cover. In an attempt to alter course, a new forest policy was developed in the late 1940s, which aimed primarily at the conservation of the remaining forests and an increase in forest cover, and the forest sector was reorganized (Müller and Venglovsky 1998). An ambitious reforestation programme was launched, albeit with limited success in terms of increased forest cover.

Currently, the state of the country's forests is again deteriorating. This is mainly due to increased pressure on forests on the one hand and the breakdown of an effective forest management system after independence, on the other. The state is unable to assure effective forest management on its own as a result of a lack of funding for protective and maintenance activities (Blaser et al. 1998). At the same time, pressure on easily accessible forests by a variety of stakeholders has increased, since the economic changes have resulted both in difficulties in obtaining energy supplies other than fuelwood and in reduced opportunities for salaried employment and therefore in a relapse into subsistence agriculture in all parts of the country.

5.2 Forest sector institutional arrangements

The State Forest Service (SFS) is the responsible state body for the implementation of the national forest policy, for forest management, hunting, management of national parks and other protected areas and for biodiversity conservation. It is part of the presidential administration and has its headquarters in the capital Bishkek. Provincial forest administration units are in charge for forest management at the level of each province (*oblast*). Locally, more than forty State Forest Farms (*leshoz*) are responsible

for the protection and management of the forests and of state owned non-forested land located on leshoz territory, mainly pastures but sometimes also arable land. The entirety of the forested and non-forested land on leshozes forms the state forest estate (*Goslesfund*) all of which is destined for forestry use in the long run.

The leshozes report to the Oblast forest administration. A leshoz is typically made up of a central office with technical and administrative staff and several forest ranges. During the Soviet period the leshozes were organized as cooperatives covering all basic needs of the resident leshoz “community” (products for everyday life, primary health care, nursery care, schooling, and social amenities) and served in this way as a complete unit of social organization (Carter et al. 2003). Indeed, to a considerable extent some leshozes continue to approximate such a residential community.

The organization and functioning of the forest sector during the Soviet period had important implications for the building-up of a national forest sector in Kyrgyzstan after its independence, such as:

- The centralised, highly hierarchical structure of the forest sector, with most of the power for decision making at higher levels and top-down planning of both protection and economic management of forest resources.
- High dependency on subsidies to keep forestry activities running. Independent Kyrgyzstan has no means to sustain the high level of subsidies that were provided from the central budget in Moscow during the Soviet era, hence the need to reduce administration costs and to integrate economically active parts of the forest sector into a market economy. This economic reality puts considerable pressure on the leshozes which are now increasingly expected to be financially self-sufficient.
- Protection oriented forest policy. The conservation of available forest resources and increase of the republic’s forest cover have been the main goals of forest policy since the Second World War. During the Soviet time, there was no need for multifunctional forest management, since forest products such as timber were provided from other parts of the Union. The question of how forest resources could be used sustainably for the benefit of the national economy and local population arose with independence.
- Distinct technical orientation of the forest sector and its planning and control system. Forest management plans did not, and still do not, explicitly refer to the concept of sustainable forest management, including social, ecological and economic aspects (Müller and Sorg 2001). The sector had no specialised staff to address social questions of forest management arising from economic transition.
- The existence of a State Forest Estate including forests as well as non-forested land.

These features still influence Kyrgyz forest policy and organization to a great extent, but are gradually changing with the development of a new forest policy and ongoing institutional reforms.

In 2003, a very thorough review of the current “Forest Concept” and the five year forestry programme was undertaken, with participation of foresters in workshops held throughout the country, in every oblast. A new draft “Forest Concept” has been prepared and is due to be approved in early 2004. This will be followed by the preparation of a National Forestry Programme, which will more concretely describe the steps for a period of ten years, which will be further specified in five year operational plans. The point of departure for the “Forest Concept” is the identification of forest, people and the state as three “corner stones”. The principle is worked out in ten strategic lines which indicate ways to address existing bottlenecks in order to make forestry a healthy and sustainable sector. These are in technical, financial, organizational, educational and promotional spheres. The role of the population in the management of forests will be strongly promoted, both through privatization of productive functions and through leasing of forest lands to individuals or groups. The role of the state will change into a facilitating one, as coordinator of the various activities towards development of multifunctional forest management.

The development of the Forest Concept has been a promising exercise, with participation of staff members from all levels of the SFS, as well as representatives of local administration and forest users. For the latter however it was not always easy to express their opinion amongst many professional foresters as they were not very prepared for the topic nor had they mandates as elected representatives of larger groups. As a first initiative towards a real bottom-up planning it was, however, a commendable move.

The SFS recognises that forestry activities cannot be conducted without consideration of the needs expressed by the stakeholders. It recognises that the conservation of forest resources and development of the forestry sector should be based on a complete building of responsibility of the general public and that it will be necessary to promote active participation of individual persons or their groups from the private sector in order to ensure economic and social benefits. All productive functions in forest management should be given into private hands – but the ownership shall remain in state hands as forests are a common good providing services to the whole population.

A major element of proposed institutional reform is decentralization and simplification of the current administrative structure. At the First National Foresters Conference (held in September 2002), the Chairman of the SFS officially declared that forest rangers⁴ would be the key figures “in the forestry sector”. This would mean that the rangers would be at the centre of both decision making and implementation of forest management. The heavy bureaucratic system involving leshozes and oblast forest administration would be reorganized into a more advice and support oriented service rather than the current double administrative and control system. The intention of these reforms is clear and concrete steps are to start in the near future.

⁴ A Forest Ranger operates as part of the leshoz staff. Each leshoz has a number of ranges. Thus, a ranger has direct contact with the rural population living in and around a leshoz.

5.3 Forest tenure and access

All forests and pastures in Kyrgyzstan are state-owned. In the case of pastures outside of leshozes, use rights are granted in the form of leases, for which fees are collected by the Ail Okmot and shared with the Rayon or Oblast authorities (Bylski et al. 2001). The leases for pastures are typically annual, but can also be longer term (ibid).

In the case of forests and pastures within leshozes, the leshoz is responsible for management and can allow access through leases. Leases within leshozes are also provided for farming plots. Again, the lease period is variable, and there are now a number of different types of leases and a variety of arrangements apply. For example, in the leshozes with walnut-fruit forests, leases allow people to collect a certain amount of fuelwood, to obtain agricultural plots, to collect hay or to harvest walnuts or fruit for sale. In exchange for access to forest resources they are usually expected to pay a share of the walnut harvest (40-70 percent), a set amount of walnuts depending on the size of the family (100-400 kg), payment in cash, or carry out certain task for the leshoz, such as collecting seeds or preparing and planting of seedlings. In some cases, in exchange for labour implemented for the leshoz, a person can use forest resources free of charge.

There are several different types of lease arrangements. Prior to the introduction of Collaborative Forest Management, seasonal (i.e. annual) leases were common. In addition to leases which allow collection of forest products, lease arrangements are also made which allow use of leshoz land for haymaking or tilling.

5.4 Collaborative Forest Management

The approach to forest management in Kyrgyzstan known as Collaborative Forest Management (CFM) has its origins in an international seminar on the walnut-fruit forests held in Arslanbop amidst the walnut-fruit forest in September 1995 (Blaser et al. 1998) and a subsequently elaborated action plan for these forests (Goslesagentsvo 1996). Based on discussion of international examples of collaborative or participatory approaches to forest management discussed at that seminar, a project was proposed to explore collaborative management of NTFPs in these forests. The project commenced in two leshozes in 1998.⁵

The original expectation would be that CFM in Kyrgyzstan would have some of the key characteristics of collaborative forest management projects elsewhere. The main assumptions were that the people resident in the area were to some extent dependent on forest products and would therefore have a strong interest in protecting and managing them if they were to obtain benefits from harvesting the products of the forests, especially walnuts, which can be a major source of income in good seasons. It was assumed that guaranteed long-term access to a forest plot would be a strong incentive for people to protect and manage the forest as secure income is an important aspect of livelihood strategies. It was also assumed that a community role in

⁵ The progress of the Swiss-supported policy experiment with CFM has been documented in a series of CFM Reports by Carter (from 1998 to 2002) and Fisher (1999, 2003), and an analytic overview (Carter et al 2003).

management would involve participation in planning and decision-making, not just provision of labour.

It is important to stress here that poverty was not an explicit concern at the beginning of the Kyrgyz-Swiss CFM Project. The emphasis of the project was “more on sustainable forest management than local livelihoods” (Carter et al, 2003). However equity in the distribution of leases and, thus, benefits, emerged as a concern (Fisher, 1999) and the value of forests for livelihoods was always recognised.

The approach that emerged was rather different from the “community-based” approach that had been envisaged. The leshozes quickly developed a lease model for CFM, based on the sort of individual contracts described above. In some ways this is not surprising, as leases providing access rights in exchange for services or payment were already in existence. However, the new approach flourished in the first two leshozes (Ortok and Usgen) and CFM was rapidly expanded into a national programme, ultimately supported by National CFM Regulations, signed on 7 July 2001 (Decree Number 377).

One of the main features of the new regulations was that CFM leases were to be issued for five years in the first instance and then would be extended for an additional 49 years. The tenant receives 100 percent of all income and products harvested under the lease. This contrasts with regular leases held for a number of years and seasonal leases, in which the leaseholder receives a specified share of the income and the leshoz receives the rest. The actual percentages vary. Another form of lease (issued under Decree No 226) is a long term lease in which people pay a percentage of the value of the harvest in cash. These long term leases sometimes cover very big areas and are not limited to forest plots.

Another key aspect of CFM is the foreseen role of local people as partners in the decision making process around the implementation of CFM. It was designed to be a transparent and democratic process, where the vision, needs and expectations of the local population are incorporated at all stages of forest management.

The rapid spread of CFM leases within and beyond the walnut-fruit forests may have been premature. Implementation was still somewhat experimental, even in the two leshozes, where the CFM approach was pioneered. The spread of CFM, or at least of the application of the term CFM, to areas with different types of forests and quite different linkages between settlements and forests became problematic. It now appears that the Regulations leave a lot of room for interpretation. They were developed based on very limited field experience and assumptions have been incorporated that now prove to be incorrect and unanticipated effects have occurred.

Some of the key issues are:

- Issues regarding equitable distribution of plots are significant, and impact on the potential of CFM to contribute to poverty reduction. In general, the SFS (including leshoz staff) are not very oriented towards poverty reduction or equity issues. (This will be discussed in the section on forests and poverty – see below.)

- The approach focused very much on contractual arrangements between individual households (or, in some cases, small group of households) and the leshozes. There was very little participatory involvement in planning or decision-making (although this is advocated in the CFM Regulations) and decision-making continued to be largely controlled by the leshozes.
- Although CFM leases provided considerable benefits to tenants, a major motivation behind the ready adoption of CFM by leshozes was that it provided a way to subsidise the costs of fulfilling targets for reforestation and sanitary work in forests.
- Forest management remained largely focused on preservation and reforestation, and CFM was not seen as part of a wider strategy of forest management incorporating sustainable use or biodiversity issues. No attempts were being made to develop broad plans for forest management, including sustainable management of grazing (a routine practice, although prohibited in theory).
- Although the original rationale for CFM was that a group or community focus would provide advantages in terms of better distribution of benefits and greater cooperation in management and protection, there was very little interest in group or “community” participation. This seems to have largely been a legacy of the very negative attitude to organized groups arising from the forced collectivization of the Soviet period (Carter et al. 2003). The disinterest in group work was shared both by the local population (who were not particularly interested in working in groups) and the leshoz and SFS staff (who were not interested in organising or working with groups). Some exceptions to this distrust of groups did occur, usually in the form of arrangements between small numbers of households related by kinship ties or proximity.⁶
- The CFM regulations were developed largely from the experience in leshozes with walnut-fruit forests. These are unusual in that there is a high value seasonal NTFP crop which is attractive to tenants and does not require a long waiting period for returns. (This differs from experiments in applying CFM to poplar plantations in the north. In this case benefits are long term and different cost and benefit sharing arrangements may be appropriate.)

It should be pointed out that the current CFM Regulations will not last forever. They will be subject to changes, based (hopefully) on careful analysis of experience and will probably incorporate (or be followed by) stricter instructions about the necessary steps to follow during implementation, stricter instructions for commissions in terms of equity and poverty and a strategy for training staff before sending them to the field.

⁶ It may be a mistake to overstate the reluctance to work cooperatively. The real issue may be a distrust of formal groups imposed or encouraged by government. Informal arrangements may have much greater potential and may well be much more common than officially acknowledged. It may also be a mistake to assume that individual use rights preclude cooperative activity through informal exchange arrangements, voluntary associations etc.

There is already a lot of pressure to change the regulations quickly, but there is a danger that, as with the first version, the job will be done hastily and the result is likely to remain somewhat flawed.

6. POVERTY AND THE FOREST SECTOR

6.1 Introduction

Any discussion of the potential for the forest sector in Kyrgyzstan to contribute to poverty reduction needs to begin with a reminder that the total area of forests is only a small proportion of the land area. This clearly limits the extent to which forests could be expected to contribute to poverty reduction at the national level, and also suggests that forests are only likely to contribute to poverty reduction for people living in or near forested areas. However, these are often remote, marginalized rural areas with relatively few income opportunities.

A second preliminary point that needs to be made is that the Government expects each ministry to contribute to poverty reduction. The Poverty Reduction Strategy Paper (Kyrgyz Republic 2003) has a few pages on the environment, but pays very little attention to the role of natural resources in poverty reduction. Nevertheless, the Government launched its PRGF (Poverty Reduction and Growth Facility) programme in 2002, and each ministry has been tasked with coming up with contributions towards poverty alleviation. The SFS is expected to take responsibility for this, but there has been no mention of specific steps. The SFS claims that, through CFM, they are creating employment opportunities for the population living in and near the forests. In this context it needs to be emphasised that employment, income generation and economic growth do not necessarily contribute to poverty reduction unless the benefits reach the poor. An analysis of the distribution of CFM benefits does not suggest either that the poor benefit substantially, or even that access to CFM leases is equitable.

6.2 Relationships between human settlements and forests

In order to understand the patterns of human use of forests and the potential for enhanced utilization of forests for livelihoods and poverty reduction, it is necessary to understand the relationships between human settlements and forests. This differs somewhat according to forest type and distribution.

Human settlements are often closely interrelated with walnut-fruit forests or riverside forests, whereas spruce forests grow partly within reach, but not in close vicinity to the villages. Juniper forests typically occur even further away from permanent settlements. A considerable share of juniper forests and some spruce forests occupy remote, higher areas of the Kyrgyz mountains which are not accessible all year round. However, such stands have also been affected by human land use for many centuries, since these areas were and still are used as high pastures in summer. In many parts of the country riverside forests are the only forests within reach of settlements.

We will now look at the application or potential of CFM for livelihoods and poverty reduction in each of the various forest types. We will begin with the walnut-fruit forests, where CFM is most relevant and add remarks on other forest types.

6.3 Walnut-fruit forests

The Walnut-fruit forests, livelihoods and income

In the case of the walnut-fruit forests, it is estimated that more than 100,000 people live in villages within or at the periphery of the forest belt (estimate made on the basis of national census results for 1999 (Abdymomunov 2001a; 2001b)). (In fact, many people actually live within the boundaries of leshozes, which can almost be thought of as forest dwelling communities under the authority of the leshoz director.) Agroforestry resource use is predominant in these forests, which can be described as a cultural landscape, a mosaic of natural, often strongly anthropogenically influenced forest stands, forest plantations, farming plots in forest openings and increasingly in open forest stands, and pastures.

Although the extent to which local people “depend” on the walnut-fruit forests for livelihoods has been questioned (Marti 2000, Carter et al. 2003), the land resources of leshozes as a whole contribute a great deal to many local livelihoods, including the viability of agriculture and livestock raising. Some people actually farm on plots within leshoz territories and, although illegal, grazing in leshoz territory is very much the norm and is an important activity in forested areas. Forest and non-forest leshoz resources are an essential part of rural livelihoods.

In general, people in the walnut-fruit forest areas seem to be content with access to those forest products that are mainly or only used for home consumption (and this is probably a significant proportion of forest products used). Where there are complaints about access for this type of use the problem seems to be mainly related to low supply limited to population, not a problem of effectively enforced restrictions. However, when forest products have market value, access becomes a problem.

The annual walnut harvest is a major source of cash income (at least in years when there is a good harvest). It has always been important for the maintenance of the leshozes and has become even more so as funding from the central government for leshozes has reduced to a point where leshozes are required to be largely self-sufficient. To a lesser extent the same is true of other fruit and nut products, but walnuts remain the most important NTFP product.

Potential of CFM for poverty reduction in walnut-fruit forests

Prior to the introduction of CFM, the labour for the annual walnut harvest was provided by casual labour and part of this labour requirement was met by the issuing of seasonal leases or contracts. These contracts allowed workers to keep an agreed percentage of the harvest for sale for their own benefit. The balance was paid to the leshoz. These contracts were essentially piece work paid in kind.

The CFM contracts adopted a different approach. The tenants were given the right to keep the full harvest of walnuts for their own benefit in return for carrying out specified tasks for the leshoz. No cash payments were involved either way. From the point of view of the tenants, the potential for cash income was a major advantage over the seasonal leases, providing labour demands for contracted tasks were not too great. In fact, disagreements over the extent to which demands were fair (complaints from

tenants) and the extent to which demands were met (complaints from the leshoz) led to the development of institutional arrangements aimed to resolve disputes in the form of CFM Boards consisting of SFS, leshoz and community representatives, along with members from the Ail Okmots and other interested parties. (See below for more details.)

Fisher (2003) presents some of the reasons why it is difficult to obtain reliable hard data “on the contribution of CFM leases to household income”:

- *There is likely to be systematic under-reporting of income by the tenants themselves (due to fear that they will be asked to repay income in excess of estimates⁷). On the other hand leshozes and SFS are likely to over-estimate income in order to support claims that the arrangements are too generous to tenants.*
- *Much of household income is in the forms of subsistence goods and many goods are bartered. Even income from walnuts, which is an important part of cash income, is sometimes in the form of bartered goods.*
- *Other benefits from CFM plots (firewood, mushrooms and sale of various fruits) are either non-cash benefits or not recorded systematically.*
- *The value of arable fields and pastures access is not easily converted to cash equivalent.*
- *Walnut harvests (and, to a lesser extent, fruit harvests) are extremely variable from season to season. As households do not usually record income, there is a dependence on memory. Recall data (especially over the long term) are always extraordinarily variable. The good harvest in 2002 may have biased memories.*
- *Even during a particular season, market prices vary considerably.*

Despite these difficulties there is a consensus that CFM (at least in walnut forests) makes a very important contribution to income. In general tenants interviewed...from several leshozes consistently said that at least 50-60 percent of income came from walnut harvests in 2002. (It is not always clear whether this referred to all household “income” or just cash income.)

In Usgen, the officially recorded 2002 harvest was 120 tonnes (possibly a considerable underestimate), of which the leshoz received 60 tonnes, seasonal tenants 30 and CFM tenants 30. The average for each of the 70 CFM tenants who had walnut stands would be c 0.430 tonne. At an average of 25 Kg/ha average income from walnuts would have been at least 10,750 soms (about USD 240 at current prices).

In comparison with this, seasonal tenants keep only 40 percent of the harvest (sometimes less), do not have legal access to other products on their plots (such as fuelwood) and do not have any guarantee that their leases will be extended. Furthermore, they do not have the expectation that they will receive 49 year

⁷ There is also a general reluctance to share household economic information with outsiders.

leases at the end of a probationary five-year period. There is no doubt that this expectation is of great importance to most CFM tenants.

It needs to be stressed here that the claim that income from walnut harvests in 2002 represented about 50-60 percent of household incomes refers to a year where there was a very good walnut harvest. In other years the harvest can be negligible. Nevertheless, it is obvious that income from walnut harvests can be very important to those with access.

The access to forest resources is usually distributed on a territorial basis with exclusive harvesting rights, although in some cases several families can have access to the same plot for a specific product (e.g one family collects apples, another walnuts, the third hay). Leshozes are reluctant to give precise information about the allocation of plots and conditions for leases. The map of a leshoz would show a mosaic of lease agreements for various size plots that are in use by individual families under various types of leases and conditions. Only a small part of the map would indicate CFM agreements.

Limitations of CFM as practiced, for poverty reduction

Despite the potential benefits, there are two factors which affect the potential for poverty reduction. The first of these is the limited number of leases made available for CFM. The second concern is about equity of access.

According to interviews by Kaspar Schmidt and his team, a central concern for nearly all local informants was the need to grant forest access to all local residents. Village heads pointed out that the local population demands access to forest resources for everybody. Most informants would prefer an even distribution of rights of use, at least for the time of the walnut harvest, to the current situation which is judged to be unjust and sometimes even socially explosive.⁸

In general, the participation of people in CFM remains limited to a maximum of about one or two dozen per forest range (there are usually three to six ranges in a leshoz). This amounts to only 5-10 percent of the total population. One exception is Ortok leshoz where some 145 families had CFM contracts as of early 2004. (Ortok has a very large forested area and relatively low population pressure.) It seems fairly clear that the usual process is that a ranger sets the limit to the number of CFM leases according to the number needed to obtain the labour required to fulfil the annual range workplan. Any additional CFM tenants will mean the loss of direct income for the forest range, and are thus not desirable. On the other hand seasonal leases bring in substantial additional income from the leshoz's share of the walnut collection (usually 60 percent) and any leases beyond the number of CFM leases likely to contribute needed labour tend to be issued as seasonal leases. Under this approach, leshozes are able to meet their workplans without paying wages. This is obviously attractive from the point of view of leshoz maintenance, but provides little scope for making CFM an

⁸ At the end of the Soviet period residents of former state agricultural farms and cooperative agricultural farms received farming land on the break up of the farms. No similar distribution occurred for the former residents of leshozes who thus start from a disadvantage (Ennio Grisa, pers. comm).

option for creating additional income for significant numbers of people. (As part of a process of leshoz reform, all forest ranges have to sustain their activities from their own revenue and funding from the government is limited to paying salaries of the central staff of the leshoz. Given current economic conditions there may be little choice, but this represents a fundamental challenge to broader implementation of CFM.)

According to the CFM Regulations:

When distributing plots, all local people must have equal opportunities to get a plot for CFM activities, if they are willing and capable to carry out forest management activities on the plots, taking into account the forest plots demand and supply ratio. [Section 1.4.5]

In relation to this, Fisher comments

This is certainly an endorsement of equity in plot distribution. It is, however, ambiguous, since it could be read as stating that everyone should get plots subject to these conditions, or alternatively that competition for a limited number of plots should be based on equal opportunity. This really does need to be clarified. However, it seems clear that the second, more narrow, interpretation is not in the spirit of CFM. (Fisher 2003: 23)

The total area of forest available for CFM leases naturally varies according to the population density, available forest area and availability of suitable (i.e. valuable) species in any given leshoz, and there are very large variations in this respect. (As Table 4 shows, the potential for distribution of CFM leases with potential for walnut harvest is much greater in Ortok leshoz than Usgen leshoz.) Nevertheless, present limits are set more on the basis of needs of the leshoz rather than on the basis of limited suitable forest resources. Unless there is a shift in thinking and practice towards treating access to CFM leases as a right rather than as a leshoz management device, no major achievements will be made towards poverty reduction.

Table 4: Population and forested area, Ortok and Usgen Leshozes

		Ortok	Usgen
1	Population of villages within leshoz territory (1999)	2,445 persons ¹	16,489 persons ²
2	Population of neighbouring villages and Ail Okmots, i.e. bordering the leshoz territory (1999)	5,851 persons ¹	19,665 persons ²
1+2	Total population of villages within the leshoz territory and neighbouring villages	8,296 persons	36,154 persons
	Forested area ³	10,282 ha including 47% walnut	21,777 ha including 25% walnut

Sources: ¹ (Abdymomunov 2001a), ² (Abdymomunov 2001b), ³ (Goslesagentsvo and LES-IC 1997; Forest Inventory Unit 2002)

Clearly the number of CFM leases which leshozes are prepared to make available is currently a limitation on potential for poverty reduction. The question of equity (who gets the leases) is also an issue.

Research by Nurlan Akenshaev in Ortok village (a settlement in Ortok leshoz, one of the two leshozes where CFM was first introduced) looked at the population based on locally ranked wealth categories and compared the numbers in each category with the number of CFM and seasonal tenants in each category (see Table 5). Although there seems to be an observable trend towards average and wealthy families having a greater than proportional share of CFM leases, analysis by Kaspar Schmidt shows the relationship is not statistically significant. However, the relationship is statistically significant if CFM and seasonal leases are taken together. Wealth then becomes a significant factor. Wealthier households are more likely to have access to forest resources in either form than very poor or poor households. It is certainly clear that there is no bias towards the poor (which would be expected if poverty reduction was a basis for distribution). It should be noted here that the figures refer to the number of leases, not the size of leases. It would be interesting to see if the average size of leases granted to the poor and very poor was the same as that granted to average and wealthy tenants, but reliable data may not be available.

Table 5: Classification of households of Ortok village and CFM and seasonal tenants into wealth categories (based on data collected by Nurlan Akenshaev)

	Very poor	Poor	Average	Wealthy	Total
All Households	36	62	60	13	171
%age of households	21%	36%	35%	8%	
Households with CFM leases	7	12	16	6	41
%age of households with CFM leases	17%	29%	39%	15%	
Households with seasonal leases	13	39	43	7	102
%age of households with seasonal leases	13%	38%	42%	7%	

More anecdotal data supports the suggestion that there is at least a mild bias towards wealthier, or perhaps more influential, people in the granting of leases:

- Forest officials (including both senior SFS officials and leshoz staff) frequently present arguments against giving leases to the poor in terms of very negative stereotypes as lazy, drunkards, etc. Households with female heads have been refused leases on the grounds that they do not have the capacity to do the work without adult male members. Typically poverty is regarded as the result of the failure to take opportunities.
- The leshozes and the forest rangers are regularly criticised by Ail Okmot officials, aksakals (elders), women's councils and others for unequal, and socially unjust allocation of access rights to land and forest resources (seasonal leases, long term leases, CFM leases)⁹. They are accused of tendencies to allocate forest leases on the basis of kinship or personal relation, to give preference to former or current leshoz collaborators, to give forest plots primarily to those who already have plots and to rich and influential households, or to give bigger or more productive forest plots to these groups of households. They also point out that the decision-making process is often very non-transparent. This often leaves households with none of the above characteristics, in particular the poor households, without formal access rights to forest resources and also leads to situations in which a few households control huge areas.
- CFM leases are frequently allocated to leshoz staff, including rangers.
- According to a report by a Swiss sociologist (Scherrer, 2004) on the whole decision making process in the context of CFM, including the criteria used for allocating plots, "poverty" is never mentioned as a criterion. Current/past leshoz staff membership, or belonging to the inner circle around the leshoz are much more factors of importance.

CFM Boards and Commissions – Checks and balances

In recognition of concerns about equity in the process of allocating leases, and of disputes arising from the enforcement of conditions of leases and performance of contracted tasks, institutional arrangements have been made to provide some sort of independent arbitration. Under the CFM rules, three bodies have been established at leshoz level (Carter et al. 2003):

- A CFM Board (at leshoz level) is intended to act as an arbitrator in the case of disputes or complaints.
- At leshoz level, the "first" commission allocates leshoz land to be available for CFM.
- At range level (but only established in some ranges) the "second" commission is responsible for the allocation of plots.

These three organizations include representatives of the leshoz, the SFS, the Ail Okmot, the tenants and others. They are supposed to be appointed in all leshozes

⁹ Source: interviews by Kaspar Schmidt and his team. This is generally accepted as being true and is rarely disputed by forest officials.

where CFM functions. In practice they are not always present and there is considerable confusion about their roles and functions.

Fisher (1999), in reference to meetings of prototypes of these institutions, observed that they tended to function as an instrument of the leshoz (assisting the leshoz to implement CFM leases) rather than as an independent body. According to Scherrer (2004), the boards are still seen as very much as leshoz instruments. The idea of an independent institution acting to provide checks and balances has certainly not developed strongly or been widely adopted in other leshozes.¹⁰ It would seem, if CFM is to emerge as an approach based on rights to natural resources, support for the further development of these institutions as civil institutions, independent of the SFS and leshozes, will be crucial.

6.4 Poplar plantations

In Chui Leshoz (northern Kyrgyzstan), an experiment has been carried out with a modified approach to CFM involving the establishment of poplar plantations (Fisher 2003). The approach is to provide tenants with a plot of land on which they establish poplar plantations. The tenant covers all costs and in return expects to receive 100 percent of profit when the seedlings are harvested in 15-20 years. (It seems that the percentage may be 70 percent if the leshoz provides seedlings.)

The difficulty with this approach, in terms of poverty reduction, is that the benefits will be in the long term (15-20 years). The profits will potentially be quite large and the SFS has been concerned that the arrangement is too generous. Much of the interest comes from a large nearby town.

6.5 Riverside forests

Riverside forests are narrow strips of forests, typically with little active management on the part of the SFS. In areas where the settlements are located close to the forest (such as in Talas Oblast), the forests are under high pressure because of illegal cutting of firewood. Where the forests are dense bushes, firewood is the main product. Other products collected in riverside forests, both for self-consumption and for sale, include berries, mushrooms and medicinal plants (Roth and Murzakmatova 2003). In more open areas the land is equally used for (also illegal) grazing. People living the closest to the forests are interested in obtaining user rights, preferably under CFM conditions, but other types of lease are also taken. Reasons are stated as “caring for the forest”, “helping the leshoz preventing illegal felling”, “planting fruit-trees”, “own recreation ground”. It is often the case that the home-plot of people interested in CFM in riverside forests immediately borders the forest strip. While these people may be the most concerned and the best equipped to look after the forest, giving exclusive use rights to a limited group of people in an area with large demand for firewood may create social problems. The potential tenants may also see the potential for CFM leases ultimately leading to private ownership as their main motivation.

¹⁰ This is probably a reflection of the absence of concepts such as checks and balances and civil society in post-Soviet states.

In Usgen Rayon, southern Kyrgyzstan, a considerable part of the original riverside forests has been transformed into paddy fields, even though the ground appears to be stony river bedding and laborious investments are needed to make it suitable for tillage. The exact loss of forests is unknown as statistics are not available. The remaining forests are typically used for collecting firewood and grazing of livestock in spring and autumn, before going to and after returning from the summer pastures.

In other places, the river-side forests may be sources of seabuck thorn, a berry that is commonly harvested for making jam (berries are rich in vitamin C) and for pressing oil which has medicinal properties.

6.6 Juniper forests

In general, juniper forests are on the higher mountain slopes, and far away from the permanent settlements. These forests play a role in the household economies only a few months per year, when people temporarily reside in the *jailoos* (high summer pastures). The use of trees and timber is strictly prohibited, but people collect dry branches for firewood and graze cattle in the open juniper stands. Medicinal herbs, various berries and mushrooms are collected mainly for local use (Roth and Murzakmatova 2003), although marketing prospects are developing in some areas. Illegal felling of the beautiful and aromatic juniper timber occurs, although again no statistics are available. Local people are reluctant to take management responsibilities if it would include remaining responsible for controlling illegal felling. As long as access to firewood and grazing is assured, their needs and expectations are fulfilled. The main potential for livelihoods lie in continued use for these purposes, which could be improved by developing optimised sylvopastoral systems. Juniper forests offers little potential for poverty reduction.

In January 2004, the EC-sponsored Juniper Forests Management Plans Project (JUMP) started, with the aim of introducing the “sustainable multipurpose management in juniper forests”. Activities are mainly organizational, scientific and educational. In the longer term the local population, who will participate in the elaboration of the new Integrated Management Plans (IMP) together with other local stakeholders, are intended to benefit from improved management of these forests and their increased involvement in forest management will be promoted by this project (Cornet and Rajapbaev 2004).

In the project proposal a list of partners for IMPs in the project has been included. These are all institutional partners. The local population are mentioned as “final beneficiaries”:

Final beneficiaries:

(i) The local stakeholders, especially the rural population, which will be involved in the process of definition, implementation and follow-up of the IMP in the area. The implementation of such IMPs should create the conditions for both social development and conservation of the resource for the long run. The involvement of local people in the introduction of sustainable management in the area is both an objective and a mean which gives the basic content of the proposed project. Especially local communities will be included in the

workshops and field studies, and the methodology for planning will be based on the involvement of these beneficiaries.

(ii) In a more global and abstracted way, there should be in the same time an important gain for the whole collectivity in terms of preservation of the biodiversity in the area.

(Laboratory of Forest Policy ENGREF 2001)

The immediate project target group, however, is the State Forestry Service, which will be equipped with both educated and trained staff and technical tools for a new style of forest management aiming at sustainability in association with the stakeholders.

6.7 Spruce forests

Spruce forests are in an intermediate position between the walnut-fruit forests and the juniper forests in terms of playing a role in people's livelihoods. The forests are at intermediate distance from villages, and people can relatively easily collect firewood. Forests are also well used for grazing and fruits like berries and medicinal plants are collected in season. Also mushrooms are collected on a large scale. Typically, they are pickled and kept for the winter. Marketing of wild mushrooms is prohibited following an incident in the late 1990s when people died after eating poisonous mushrooms, but is still being practised despite the ban (Roth and Murzakmatova 2003).

The most important source of income from the spruce forests is the timber, but so far this has never been accessible to the local people. Harvesting and selling of round timber has been exclusively in the hands of the leshozes. Now that the SFS is orienting itself towards privatization of productive tasks in the forest, the door is possibly opening for local people to get income from felling/selling round timber. Basically, this will have to take place on a tender basis. In principle local companies (to be established) could get a concession for a certain price. Of course regional or Bishkek based firms will also compete, and it remains to be seen how this will develop for the local economy, especially in terms of employment. The ideal situation would be that redundant leshoz staff might start small private companies and provide local employment. Apart from thinning and felling, other productive tasks, like producing planting material, planting itself and maintenance of young stands could also be handed over to private companies in future.

However, economic activities involving timber harvesting and processing do not necessarily translate into poverty reduction. For this to happen there needs to be an explicit policy of directing contracts to local companies and encouraging local employment.

CFM following the individual lease/contract approach does not seem to have much potential in the spruce forests and, while local timber cooperatives might have potential, the dislike of cooperative organizations might make this impossible.

7. CONSTRAINTS AND OPPORTUNITIES FOR POVERTY REDUCTION AND FORESTS IN KYRGYZSTAN

The potential for forests to contribute to poverty reduction in Kyrgyzstan is limited by the small percentage of forest cover in the country. But, within this small area, there are real possibilities for making a significant contribution.

It is important to remember that forests already contribute to the maintenance of human livelihoods by providing forest products for direct consumption and by playing an important role in livestock raising in the form of hay and pastures in forests and on leshoz land. In some areas the supply for these purposes is adequate; in other areas it is limited.

In terms of a more direct use of forests (where they are available) to actively contribute to poverty reduction, there are a number of major constraints:

- Some forest types are slow growing and have little potential for use as commercial timber or generation of income through NTFP harvesting. This is essentially true of juniper forests.
- Some forest types (spruce and river-side forests) do have potential for commercial harvesting, but use for these purposes by local people is so far illegal and the SFS has no intention of giving up control. In the current climate of economic reform focusing on privatization, the contracts for harvesting are almost certain to be issued to private contractors. It is only if specific provisions are made to issue contracts to small local companies, and probably to assist these companies with initial investments and training that any major impact on rural poverty is likely.
- CFM and other approaches to involve local people in forest use and management (including paid leases) have real potential for generating significant income in some areas such as areas with walnut-fruit forests and other high value, low investment NTFPs (pistachio, almond and some fruits). However CFM leases are very limited in number and distribution tends to be inequitable. Still, for other types of leases the allocation is probably even less transparent and equally difficult to overcome for poor people and to do those who do not belong to the inner circle around the decision-makers.
- Although poverty reduction is an expressed priority of the government, this has not translated into poverty reduction becoming an effective priority of the SFS which is heavily focused on forest conservation and reforestation. CFM is essentially seen as a means of sustaining the leshozes and protecting the forest rather than as a means of addressing poverty by foresters. While foresters are aware of the role of forest resources in local people's livelihoods and, in particular, of the contribution of walnut to raised living standards in villages of the walnut-fruit forests, the more focused issue of poverty reduction does not seem to concern most foresters.

- Foresters on all levels understand forestry primarily as a technical-administrative discipline while little attention is paid to social aspects of forest management. From this observation the recommendation to the SFS to consider capacity building within the service itself to deal with the social side of forest management can be made. At the local level, the Ail Okmot is considered to be responsible for social questions whereas the leshoz focuses on the technical side of natural resource management. Foresters often refer to this division of responsibility when social questions come up in discussions.
- While working in the field, mainly in southern Kyrgyzstan, we have made little experience which would suggest that there is a strong priority amongst forestry decision makers to empower the rural poor. While there is a readiness to provide poor households with material support, forestry is seen as essentially a technical and sectoral concern.
- The distribution of CFM leases is not based on the rights of people to access forest resources.

In addition to these specific constraints, it is worth noting that Kyrgyzstan, like other transitional economies, seems to be jumping from the old notion of the state collective through to aggressive privatization, without considering the possibility of developing new forms of social organization or resource tenure. The absence of established institutions of civil society contributes to this problem as does the absence of systems of checks and balances.

The very individualistic nature of CFM as a form of contract between the state and the individual isolates the individual, because there are no institutions to effectively challenge the state on behalf of the individual. The CFM Boards and Commissions tend to be instruments of the leshozes, not neutral mediators and there are few voluntary organizations.

In the early days of the CFM project there was a lot of discussion about the perceived missed potential for cooperation between tenants. It is likely that the highly individualistic and localised nature of the walnut harvest provides little incentive for establishment of new common property arrangements (and these probably would not be accepted in early post-Soviet Kyrgyzstan), but cooperation in natural resource management is not limited to communal rights or access. The potential for voluntary action in support of rights or in demanding rights is a useful role for voluntary associations. Amongst the longer established CFM tenants awareness of the benefits of group formation is rising. Defending rights in front of forestry officials, soliciting legal advice, supporting new tenants with practical information, joint marketing of forest products and sharing information about (CFM) developments are a few of the topics that people identify. The benefits are not exclusively limited to CFM tenants, but could be extended to the wider category of forest users. Stepping up from a voluntary assembly into a formal group may occur in future years. This would open up more possibilities for supporting in terms of capacity development and providing legal status.

There is also a case of a hamlet, in total about 17 households, who received a long-term, non-CFM lease for a large plot of forest above the hamlet in one of the leshozes in the walnut-fruit forests. These households organized themselves voluntarily and have already conducted some planting work together.

So, what needs to be done? We suggest that there are a number of things which would substantively help:

Making the SFS accountable to the elected government for prioritising poverty reduction in accord with stated government policy. It is possible that providing resources to reduce the pressure on the leshozes to be self-sufficient might enable the leshozes to be more sympathetic towards this policy. The focus on sustainable SFS and leshozes may need to shift to sustainable forest management including social, ecological and economic dimensions.

Establishing the principle that all suitable forest should be made available for CFM and other leases and that selection of CFM tenants and other leaseholders being granted exclusive access rights to forest resources must positively discriminate towards the poor. A principle for focusing on poverty reduction could be developed. One suggestion is that a principle could be framed along the following lines:

CFM should be available to as many tenants as possible within the limits of available and suitable forest area within a leshoz. Priority for allocation of the plots should be given to the poor who are in most need of income.
(Recommendation in Fisher 2003)

Even leshozes which do not take up CFM but stick to paid leases (such as 226 leases) or alternative arrangements could make a contribution to poverty reduction if they applied such positive discrimination.

In fact, if something like this is not developed and implemented, CFM leases and other schemes providing exclusive forest access to a few people in a village, far from contributing to poverty reduction, are likely to lead to an increased number of people disempowered in terms of access to resources. In other words, “creeping privatization” may lead to increased poverty, not poverty reduction.

It is important to remember that leshozes often have not only forested areas, but also open land (including pastures and plots for farming). If a pro-poor policy was applied to non-forested plots as well as forested plots, there is potential for leshozes to make a considerable contribution to poverty reduction. This would help poor people to diversify their farming systems and reduce vulnerability. Granting use rights to forest plots will help little to reduce vulnerability substantially, because of the strong fluctuations in walnut yield, unless efforts are also made to increase and diversify production on the plot (see below). So, non-forested areas under leshoz control play an important role to reduce vulnerability and increase food security.

Some people may suggest radical tenure reform in the shape of the permanent distribution of forest plots to people living on or near leshozes. Even if this was politically possible, it really is doubtful that small fragmented private plots would be a sound basis for sustainable management of forests in the future. Furthermore, it is

questionable whether poor people could profit from such a radical change, as it is generally acknowledged that poor people have difficulties in making their voices heard in decision making over natural resources - everything depends on the distribution policy and criteria for the distribution. Such a move could in fact deprive many poor from access to forest resources and become a poverty trap. It also raises the question of intergenerational equity.

Further improving the procedures for allocating leases and reviewing CFM decisions and complaints by moving powers away from the leshoz into an independent Board, by increasing the numbers of local non-SFS/leshoz representatives and decreasing the number of SFS/leshoz representatives and making the Board responsible to an outside authority (such as Oblast Governor). It is probable that this would not be politically possible in the near future. Nevertheless, evolution is needed in the direction of increased accountability for decisions beyond the SFS and improved checks and balances.

Encourage the formation of voluntary tenants associations, to provide these with legal status and to support them in terms of capacity development. These should not be formed by the SFS or the leshozes as instruments for implementing their policies, but should be based on self-identified needs and objectives. They would, therefore, not have a standard form, but may differ between different locations and different groups.

In the case of commercial forest operations, there needs to be an explicit policy of directing contracts to local companies and encouraging local employment in order to ensure that income is directed towards the rural poor.

Improved technical forest management practices also have potential to contribute to both improved livelihood security and increase income generation, once measures have been taken to ensure that poor families get access to forested and non-forested areas. The walnut-fruit forests are not a reliable source of income due to considerable fluctuations in yields of fruit, in particular of walnut. This situation can be improved by developing sustainable agroforestry systems, including sylvopastoral systems, on the basis of available agroforestry practices. With this the range of products could be enlarged reducing the dependency of local households on a few forest products and reducing the general production risk. Such systems, in particular improved sylvopastoral systems, could also be developed for the juniper and riverside forests, and maybe also for spruce forests. Research on agroforestry has been started in the walnut-fruit forests (Messerli 2002) and continues in the framework of the joint Kyrgyz-Swiss applied research project "Orech-Les" (ETH Zurich 2001). The experience shows that foresters, researchers and other specialists increasingly open up towards integrated approaches to natural resource use, once the obstacle of a rather strong sectoral thinking is overcome.

8. OTHER COUNTRIES IN THE REGION

8.1 Forest resources in West and Central Asia

In the following section, the focus of the paper is widened beyond the borders of Kyrgyzstan in an attempt to identify key issues and communalities regarding forests and poverty in other countries in West and Central Asia. On the whole, this region is very sparsely forested and its scarce forest resources are mostly linked to mountain ranges and rivers, the exception being shrublands occurring in arid areas. This is reflected in the area statistics for all countries of the region given in Table 6. It appears that Kyrgyzstan is reasonably typical of Central Asia in terms of availability of forest resources, with forest covers of all the Central Asian CIS countries ranging between three and eight percent of the land area and forest areas per capita between 0.1 and 0.9 ha/capita. Nearby Iran has a forest cover of the same scale. Countries with relatively high forest covers above ten percent of their land area and distinctly higher growing stocks than all the other countries are the Caucasian CIS republics and Turkey. The countries of the Arabian Peninsula form a distinct group as far as forest resources are concerned and are therefore not covered in this chapter. In all but one of these countries (United Arab Emirates) forest cover is below one percent of the land area and plantations, to a considerable part established for ornamental purposes, prevail in most of these countries.

In nearly all countries of West and Central Asia, forests are exclusively state owned, the exception being Cyprus with 42 percent of the forested area in private ownership in 1996. Very small areas (i.e. around one percent of the total forested area or less), are in private hands in Israel, Jordan, Syria and Turkey (Timber Section UN-ECE/FAO 2000; Pswarayi-Riddihough 2002). Ministries or agencies of the central government control forests. The organization of the forest sector in the former Soviet republics is still very similar to the one described for Kyrgyzstan in Section 5.

Table 6: Estimates of forest resources in West and Central Asian countries for the year 2000. The “land area” figure refers to the total area of a country, excluding areas under inland water bodies. Legend: n.s.: not significant, indicating a very small value; n.a.: not available.

Country	Land area [‘000 ha] ^{1,2}	Total forest area [‘000 ha] ^{1,2}	Percentage of land area [%] ^{1,2}	Forest area per capita [ha/capita] ^{1,2}	Forest plantations [‘000 ha] ^{1,2}	Wood volume in forests [m3/ha] ^{1,2}	predominantly broadleaved ³	predominantly coniferous ³
Central Asian countries								
Kazakhstan	267,074	12,148	4.5	0.7	5	35	12.6% *	16.6% *
Kyrgyzstan**	19,180	1,003	5.2	0.2	57	32	61.6%	38.4%
Tajikistan	14,087	400	2.8	0.1	10	14	62.5%	37.5%
Turkmenistan	46,992	3,755	8.0	0.9	12	4	94%	6%
Uzbekistan	41,424	1,969	4.8	0.1	300	6	89.5%	10.5%
Caucasus and Turkey								
Armenia	2,820	351	12.4	0.1	13	128	92.2%	7.8%
Azerbaijan	8,359	1,094	13.1	0.1	20	136	98.5%	1.5%
Georgia	6,831	2,988	43.7	0.6	200	145	n.a.	n.a.
Turkey	76,963	10,225	13.3	0.2	1,854	136	34.8%	65.2%
Arabian Peninsula								
Bahrain	69	n.s.	n.s.	n.a.	0	14	n.a.	n.a.
Kuwait	1,782	5	0.3	n.s.	5	21	n.a.	n.a.
Oman	21,246	1	0.0	n.s.	1	17	n.a.	n.a.
Qatar	1,100	1	0.1	n.s.	1	13	n.a.	n.a.
Saudi Arabia	214,969	1,504	0.7	0.1	4	12	n.a.	n.a.
United Arab Emirates	8,360	321	3.8	0.1	314	n.a.	n.a.	n.a.
Yemen	52,797	449	0.9	n.s.	n.a.	14	n.a.	n.a.
other West Asian countries								
Afghanistan	64,958	1,351	2.1	0.1	n.a.	22	n.a.	n.a.
Cyprus	925	172	18.6	0.2	0	43	0.9%	99.1%
Gaza Strip	38	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Iran	162,201	7,299	4.5	0.1	2,284	86	n.a.	n.a.
Iraq	43,737	799	1.8	n.s.	10	29	n.a.	n.a.
Israel	2,062	132	6.4	n.s.	91	49	45.1%	54.9%
Jordan	8,893	86	1.0	n.s.	45	38	n.a.	n.a.
Lebanon	1,024	36	3.5	n.s.	2	23	n.a.	n.a.
Syrian	18,377	461	2.5	n.s.	229	29	n.a.	n.a.
West Bank	580	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

* The remaining 70.8% of the forested area in Kazakhstan are categorised as mixed broadleaved and coniferous stands.

** These figures for Kyrgyzstan are not entirely consistent with the data given in section 5.1. Another, lower figure for the forested area, 797,000 ha (1995), is given in (Timber Section UN-ECE/FAO 2000, Table 1, p. 62). This illustrates the uncertainties of estimates of national forest resources from CIS countries, which are to be taken with caution, in particular in cases where, as in Kyrgyzstan, no data from a recently conducted national forest inventory are available.

Sources: ¹ (FAO 2000), ² (FAO 2001), ³ (Timber Section UN-ECE/FAO 2000)

8.2 Nature of forests

Despite the limited cover of forests and woodlands in West and Central Asian countries, there is a high diversity of different forest types (see Table 7), resulting from the high variation in growing conditions in the area with its mountain ranges, vast arid areas and limited water bodies. All forests types occurring in Kyrgyzstan can be found in other parts of Central Asia. Some of them, for instance juniper, pistachio or riverside forests, haven even a much broader range of distribution and are equally important in more distant countries of wider West and Central Asia. An important forest type occupying vast areas in arid lowlands, steps, semi-deserts and deserts of West and Central Asia are open woodlands formed by drought resistant, well-adapted woody species (predominantly saksaul (*Haloxylon* spp.), further species include tamarix (*Tamarix* spp.), salsola (*Salsola* spp.) and elaeagnus (*Elaeagnus* spp.) species). Other dominant woody species and groups of species come up further West in Iran and in the Caucasus, such as beech, oak, hornbeam and alder species (von Maydell 1978), indicating the transition to the woody flora of South-Eastern Europe. Further south in the Near East, oak, juniper, pine and cedar species prevail in the remaining natural forests (Pswarayi-Riddihough 2002, p. 45-53). Plantations, both with local as well as introduced species have been established in most of the countries of West and Central Asia, as indicated in Table 7.

Table 7: Important forest types occurring in West and Central Asia (Arabian Peninsula excluded) and their relative importance in sub regions.

Please note that this table gives only rough indications and does not claim to be complete, as only the most important types of forests in terms of occupied area are listed.

Legend: X: occurring, but on limited area; XX: covering substantial areas in the sub region; XXX: occupying a large part of the total forested area in the sub region.

	predominantly broadleaved						predominantly coniferous		
	forests dominated by non-fruit bearing broadleaf species	pistachio forest	forests dominated by fruit and nut bearing woody species other than pistachio	shrublands in arid zones	riverside forest	mangroves	forests dominated by spruce, pine or fir species	juniper forest	cedar forest
Central Asia	X	X	X	XXX	XX		XX	X	
Caucasus and Turkey	XXX	X	X	X	XX		XXX	XX	
other West Asian countries	XXX	XX		X		X	X	XX	X

Compiled using information from: (von Maydell 1978; 1983; Yachkaschi 1992; Pswarayi-Riddihough 2002)

8.3 Role and state of forests

Forests in West and Central Asia are important sources of fuel wood, on which the overwhelming majority of the population in rural areas within reach of forests still or again, in the case of the former Soviet republics, relies. They also provide valuable NTFPs, in particular pistachio, walnut, wild apples, berries, mushrooms, medicinal herbs and sometimes game (FAO 2000; Timber Section UN-ECE/FAO 2000, p. 355; Pswarayi-Riddihough 2002). Another key aspect of forest use in West and Central Asia is the significance of forested areas for grazing providing stable feed for large number of animals in generally arid regions, fodder collection, as bee-keeping ground and, sometimes, as land reserve for tillage. This emphasises the link between forest use and broader land use issues. Official figures given for harvested timber suggests that on the whole, commercial timber extraction is of limited significance in the region, with the exception of Turkey, Cyprus, the Caucasian CIS republics and Kazakhstan (FAO 2000). Most of the forests in the region are important in terms of protection against natural hazards (landslides, erosion) and desertification and because of their contribution to the regulation of the regional water household (Timber Section UN-ECE/FAO 2000; Pswarayi-Riddihough 2002). The high diversity of forest types, tree and shrub species points to the significance of West and Central Asian forests for the conservation of woody biodiversity and to the vital role of forest ecosystems as habitats for flora and fauna to be preserved. A particular feature of forests and woodlands in all parts of West and Central Asia, is the presence, in some forest types even dominance, of fruit bearing woody species, amongst which also species and relatives of species of eminent commercial interest worldwide, such as apple, pear, pistachio or walnut. The genetic diversity of their wild relatives growing in West and Central Asian forests is of global importance.

A decline in quantity and quality of forests and general environmental degradation of forest areas is reported to take place in all parts of West and Central Asia. Generally increasing pressure on natural resources and on forests in particular from a large and ever-increasing rural population, unsustainable harvest rates, especially of fuel wood, overexploitation over centuries, overgrazing, and long-lasting forest conversion to other land-uses are some of the main causes for this development and are sometimes compounded by inadequate management of the remaining natural forests by often weak, understaffed state institutions (Yachkaschi 1992; Ter-Gazarian et al. 1995; Le Houérou 2000; Pswarayi-Riddihough 2002; Tüzün and Sezer 2002).

The national Poverty Reduction Strategy Paper of Armenia lists two specific problems resulting from forest degradation and a decline in forest areas which affects poor people in particular: Firstly, decreasing availability of forest products, such as fruit and medicinal herbs for poor families, and secondly, increasing difficulty for women and old men to collect the necessary fuelwood for heating (Republic of Armenia 2003, p. 89)) often leading to a decrease in time available for other productive activities. These examples, which might be taken from nearly every region in West and Central Asia, illustrate which consequences forest degradation entails for poor people.

8.4 Forests, forest policy and poverty

The observation made for Kyrgyzstan that social issues in forestry and links between forest policy and poverty reduction are only beginning to emerge from ongoing discussions applies to all former Soviet republics and presumably also to some other countries in West and Central Asia. This is also reflected in the fact that hardly any literature on the poverty-forestry nexus in former Soviet republics, apart from policy documents published by international donors, could be found in a literature search, which was conducted using major agricultural, forestry and social-sciences databases as well as search engines on the internet and using keywords in Russian, English, French and German. One of the main reasons for that is, undoubtedly, the distinct focus of forest policies in former Soviet republics on forest conservation and the ecological role of forests. The inclusion of social and economic aspects (Ter-Gazarian et al. 1995) and, in a broader sense, the development of multipurpose forest management as a means to achieve sustainability is therefore seen as a major challenge for the ongoing redefinition of forest policies in these countries (World Bank 2000, p. 32; 2001a, p. 35).

An example from Georgia illustrates the current state of this shift from a conservation orientation to a more comprehensive forest policy incorporating social aspects of forest management. In a declaration of principles and objectives for the national forest policy, the Georgian Government committed itself to the elaboration of a long-term forest strategy and the introduction of a sustainable forest management system that would also “make a significant contribution to poverty eradication in rural areas”. It also lists the participation of stakeholders, including local communities and individuals, in particular women, as a basic principle of its national forest policy. It seems however that these principles have only limited weight on a practical level, since the following “programme of actions” for the period of 2002-2010 does not contain any explicit reference to poverty reduction or to participatory approaches and no concrete measures in these fields are mentioned (Government of Georgia 2002).

Despite the fact that relatively little evidence is available from the literature, some points on poverty and forests in West and Central Asia in general and the role of forest resources for important dimensions of human well being, such as opportunity, security and empowerment, can be made from what has been said so far and the limited literature found.

The range of services that forests provide and of products that can be gained from forests and woodlands in West and Central Asia shows their potential for increased income opportunities, their significance for livelihood of the rural population in areas with forest resources and, hence, their relevance for poverty reduction. Two particular aspects of West and Central Asian forests and their use should be emphasised: firstly, the availability of a wide array of often easily marketable NTFPs, in particular nuts and fruit, in many of the occurring forest types, and secondly, the importance of forested areas for livestock production and other agricultural activities. For example, pistachio forests in Uzbekistan play a similar role in the livelihoods of poor rural families as a source of cash income as the walnut-fruit forests in Kyrgyzstan, in some cases providing more than 60 percent of the total annual income of local families (Chernova and Renkema 2003). Thus, the use of forest resources can contribute significantly to poverty reduction by providing additional benefits and income for

rural people, provided that access rules are defined in a way which ensures that poor households benefit from forest use, and an effective management system ensuring sustainable resources use and preventing further environmental degradation is put in place. In this context, the question regarding an acceptable, fair and socially just balance of benefits for forest users, including local people, and the state arises, given that nearly all forest resources in West and Central Asia are state owned.

Improved forest production systems, in particular agroforestry and more specifically sylvopastoral systems, can contribute to improve livelihood security of the rural population. It is worth remembering that during the Soviet era the introduction of woody elements to improve the water household and the production of pastures has been promoted both in Central Asia as well as in the Caucasus (von Maydell 1978; 1983). Such measures, termed “phytoamelioration”, were typically carried out on a large scale and involved the use of heavy machinery and are therefore currently out of reach. However, the ecological knowledge available could be used for small-scale measures with low technological inputs for the same purpose. A typical characteristic of the organization of the forest sector in CIS countries is also the availability of non-forested land, often pastures, in the State Forest Estate controlled by the State Forest Service. Thus, foresters can potentially play a key role in the development of improved integrated land use systems and of sylvopastoral systems in particular.

As far as participation of the local population in forest management is concerned there is some variation among the countries in West and Central Asia. Efforts to promote devolution regarding forest management and introduce participatory approaches are reported from Iran (Abdollahpour 2000, cited in FAO 2000), Turkey (UNDP 2001) and Georgia (World Bank 2004), and there is an increasing number of ongoing and planned projects funded by international donors on sustainable management of natural resources involving local people (cf. examples listed in (World Bank 2000; 2001a)). The role of participatory approaches to forest management and gender issues were topics discussed on an open-ended expert meeting, attended by representatives of most of the West and Central Asian countries, on “Special Needs and Requirements of Developing Countries with Low Forest Cover and Unique Types of Forests” in October 1999 in Tehran (IRAN-UNEP-FAO Initiative 1999). However, (Pswarayi-Riddihough 2002, p. 49, p. 14-15) notes a certain reluctance among decision makers to implement participatory approaches to forest land management in the Middle East (and North Africa), despite an increasing recognition of the importance of participatory aspects and all the above mentioned efforts to promote them.

8.5 Forest resources in national poverty reduction strategies

This section draws mainly on the Poverty Reduction Strategy Papers (PRSP) published by the Governments of Armenia, Azerbaijan, Georgia and Tajikistan¹¹ and the national report on sustainable development for Turkey prepared for the World Summit in Johannesburg in 2002 (Tüzün and Sezer 2002). At the time of writing, no national poverty reduction strategy paper was available on the IMF website for other countries covered in this chapter.

¹¹ Government of the Republic of Tajikistan 2002; Government of Georgia 2003; Republic of Armenia 2003; Republic of Azerbaijan 2003; all available from the IMF website: <http://www.imf.org/external/np/prsp/prsp.asp> (20.01.2004).

The poverty reduction strategy for Azerbaijan refers to international experience with collaborative forest management and its potential to improve sylvopastoral practices and forest management in the areas concerned (Republic of Azerbaijan 2003, p. 43). The focus of the planned measures is however on establishment of plantations. Reforestations project should be preceded by feasibility studies, as a means to ensure, amongst others, that such plantations do not limit further the access of local communities to land for grazing and cultivation (Republic of Azerbaijan 2003, p. 93).

The Armenian Government lists the maintenance and the increase of the country's forest resources as an important measure on the way to achieve the millennium development goals (Republic of Armenia 2003, p. 38) and mentions the strengthening of the forest management system as component of the wider environmental policy contributing to poverty reduction. In the forest sector, special importance should be paid to modern inventory methods and control mechanisms (Republic of Armenia 2003, p. 90). Investments into heating systems should be increased as a means to ease pressure on forest resources for fuel (Republic of Armenia 2003, p. 95).

In the Georgian national poverty reduction strategy much emphasis is given to the establishment of a clearly defined ownership system and rights of resource use as a precondition for efficient use of natural resources (Government of Georgia 2003, p. 39). Reforestation and the planting of nut bearing species in particular figure in the list of planned activities for the period from 2003 until 2005 (Government of Georgia 2003, p. 91). Phased privatization of forests is planned, but no details are given regarding the extent of privatization and the nature of forests that are to be privatized (Government of Georgia 2003, p. 40). In an earlier, intermediary version of the PRSP it was said that step-by-step about 10 percent of the total forest area should be privatised (Government of Georgia 2000, p. 45). A participatory element is introduced in the field of environment protection by action plans for differentiated environment protection on a local level, which should be developed in a public process involving all stakeholders and should allow the sustainable management of local resources (Government of Georgia 2003, p. 53).

The Government of Tajikistan stresses the importance of efficient use of and fair access to land and natural resources, but does not explicitly refer to tree or forest resources in its strategy (Government of the Republic of Tajikistan 2002, p. 41).

In Turkey, the policy proposals made to ensure sustainable forest management, seen as a means for poverty reduction, include, among others, the provision of loans and grants to promote rural development in forest villages. Introducing fishing, bee keeping or promoting tourism should extend the range of sources of income. Another proposal is the development of alternative approaches to problems with livestock rearing in forested areas, such as controlled grazing in degraded forests (Tüzün and Sezer 2002). It is expected that in this way opportunities for villagers can be broadened and their livelihood security can be improved.

8.6 Concluding remarks on the West and Central Asia Region

The remaining forest resources in West and Central Asia can undoubtedly play an important role in poverty reduction in the region and efforts are being made to

strengthen this link. The emerging picture is one of an ongoing process of redefining forest policies in CIS countries as well as in other countries of West and Central Asia in which poverty and related issues are being considered by the decision makers, albeit in a rather cautious stepwise way, and are slowly gaining weight. However, it seems that a lot remains to be done to break down policy declarations emphasising the link between forests and poverty to a practical, operational level. In fact, the main focus of forestry measures listed in national poverty reduction strategies is on ensuring the running of the forest sector and establishing plantations, which is undoubtedly relevant for poverty reduction, but in itself not a guarantee that rural poor will obtain benefits from forest resources.

It seems also that international organizations and donors promoting the role of forest resources for poverty reduction are the dominant driving force in many cases. This points to potential risks on both sides: the risk that, on the one hand, political declarations made in favour of a stronger inclusion of poverty and other social issues in forest policy are nothing more than paying lip service to the agenda of the international donor community; and, on the other hand, the danger of pushing policies which are mainly based on Western values not necessarily compatible with the values rooted in local cultures. Carter et al. (2003) point out that a real dilemma for the CFM Project in Kyrgyzstan was the dilemma “between sticking to principles (such as promoting genuine local participation and equity) and building local, Kyrgyz ownership of the CFM concept”.

9. CONCLUSIONS

The case of Kyrgyzstan shows clearly that there are connections between forests and poverty reduction. Although the total area of forests is relatively small, people living in and around forests make considerable use of a variety of forest products for their livelihoods. There is evidence to show that income from forest products can, in some cases, make a positive contribution to income generation and poverty reduction, but only if the institutional arrangements governing access to the products are seriously reformed.

Many countries in West and Central Asia have much in common with Kyrgyzstan, both in terms of the extent of forest cover and the ways in which people use the forests. They also share some institutional features, including a strong emphasis on state ownership of forests and management by strong forest agencies.

Some general lessons can be drawn from the situation in Kyrgyzstan in general and the Kyrgyz experiment with CFM in particular and we believe that many of these will be applicable to other countries in the region. At least they are key themes, or focus points.

- The potential for forests to contribute to poverty reduction revolves around the need for improving access to resources. Clearly, this requires changes to laws and regulations affecting access and an enhanced focus on participatory approaches to forest management.
- Providing private access to forests (whether through temporary leases or permanent rights) does not equate to poverty reduction. To achieve poverty reduction requires a deliberate focus on providing and guaranteeing access to the poor. If this cannot be achieved through positive discrimination then conscious efforts must be made to guarantee equal access.
- Forest authorities may be reluctant to fully commit themselves to poverty reduction objectives in place of more traditional concerns with forest protection, reforestation and even institutional maintenance. Mechanisms may be needed which make them more accountable to broader government objectives and policies. The areas of concern here are (1) the need for institutional change within forest departments and ministries as they begin to manage forests for the benefit of people and in collaboration with people and (2) the need for strengthened civil society institutions which can empower people in forest management and access issues.

In order to move more directly towards the use of forests to contribute to poverty reduction, countries in the region will need to grapple with a variety of issues and to face a number of gaps in knowledge.

At the national level there is need for analysis of forest policy, both on paper and its implementation in the field, focusing on its implications to poverty reduction.

- What tools, mechanisms, processes are supposed to contribute to poverty reduction according to policy documents (conceptual documents such as national forest programmes, forest law, etc.)? Which other existing tools and mechanisms might be useful for poverty reduction? A matrix with key aspects of poverty (security, opportunities, participation-empowerment etc.) might be useful for such an exercise.
- What is the reality, the current situation in the field? Who benefits from forest use? All members of rural communities? Mainly local elites? What about the poorest members of the local communities? If they do not benefit, why not, what are the constraints? What potentials exist for improvements? As we have seen in the paper, it is not enough to conclude that forest use contributes to poverty alleviation from the observation that members of rural, often marginalized and hence poor communities use forest resources. It is clear that one has to identify “the poor” first (using wealth ranking as a key tool), describe the benefit they get from forest resources under the existing regime(s), comparing this to people who are better off, and identify obstacles and constraints currently limiting forest benefits for poor people.

Once such a national level analysis has been carried out, this information could be used to develop policy changes specifically targeted to the benefit of poor people (“the poorest of poor rural communities”). One way this could be done is by exploring the contribution of forest services to national poverty reduction strategies.

The potential for new or changed policies needs to be checked against probable consequences or scenarios. How are particular changes expected to affect poor people (decreased versus increased access, security, participation in decision-making etc.)? What can help the poor? What risks locking them in poverty (potential poverty traps)?

A further step might be the exchange of relevant experience between neighbouring countries, possibly at occasions such as sub-regional meetings. Meetings held in the process of the elaboration of the Forestry Outlook Study for West and Central Asia might provide such an opportunity.

REFERENCES

- Abdollahpour, M. (2000) Forest policy in Iran. Country report. FAO regional workshop on forest policy formulation and implementation in the Near East countries, 3-6 June 2000, Cairo.
- Abdymomunov, R. A., Ed. (2001a) Conclusions of the First National Census conducted in 1999. Oblast Jalal-Abad, Book III, Series R. Bishkek, National Statistical Committee of the Kyrgyz Republic.
- Abdymomunov, R. A., Ed. (2001b) Conclusions of the First National Census conducted in 1999. Oblast Osh, Book III, Series R. Bishkek, National Statistical Committee of the Kyrgyz Republic.
- Blaser, J., Carter, J. and Gilmour, D. A., Eds. (1998) Biodiversity and sustainable use of Kyrgyzstan's walnut-fruit forests. Gland, Cambridge and Bern, IUCN and Intercooperation.
- Brylski, Phillip, Tjaart Schillhorn-van Veen and Paavo Eliste (2001) Kyrgyz Republic Mountain Rangeland and Forest Sector Note. ECSSD Environmentally and Socially Sustainable Development Working Paper No 33. September 10, 2001. Washington, D.C., World Bank, Environmentally and Socially Sustainable Development sector of Europe and Central Asia (ECSSD).
- Carter, J. CFM Reports 1/98, 2/98; 3/99; 5/00; 6/00; 7/01; 8/02. Collaborative Forest Management in Kyrgyzstan: Exploring a new approach. Reports on missions to Kyrgyzstan, submitted to the Environment and Forestry Sector of the SDC. INTERCOOPERATION and GOSLESAGENTSTVO.
- Carter, J., Steenhof, B., Haldimann, E. and Akenshaev, N. (2003) Collaborative forest management in Kyrgyzstan: Moving from top-down to bottom-up decision-making. London, IIED Gatekeeper Series No. 108.
- Chernova, G. M. and Renkema, H. (2003) Draft paper entitled "Fighting Desertification and Improving People's Livelihoods with Pistachio Trees".
- Choukourov, C. and Choukourov, R. (1994) *Peuples d'Asie Centrale*. Paris, Syros.
- Cornet, J.-G. and Rajapbaev, M. (2004) Criteria and Indicators for Sustainable Management of Juniper Forests in Southern-Kyrgyzstan. Nancy, Laboratoire de Politique Forestière de l'École Nationale du Génie Rural, des Eaux et des Forêts, Commission of the European Communities. 96 pages.
- Dubois, Olivier (2002) Forest-based Poverty Reduction: A Brief Review of Facts, Figures, Challenges and Possible Ways Forward. Paper prepared for the International Workshop on "Forests in poverty reduction strategies: Capturing the potential.", 01-02 October, 2002, Tuusula, Finland.
- Elebaeva, A. and Pukhova, M. (2001) Political transformation in Kyrgyzstan: specific features. *Central Asia and the Caucasus* 4(10): 136-142.
- ETH Zurich (2001) ORECH-LES Biodiversity and sustainable management of Kyrgyzstan's walnut-fruit forests: Development of new silvicultural approaches. Zurich, Swiss Federal Institute of Technology Zurich (ETH Zurich). 31 pages.
- FAO (2000) Global Forest Resources Assessment 2000. Rome, FAO.

- FAO (2001) State of the World's Forests 2001. Rome, FAO.
- Fisher, R.J. (1999) CFM Report 4/99 Collaborative Forest Management in Kyrgyzstan: Exploring a new approach. Report on a mission to Kyrgyzstan 3 - 23 October 1999, submitted to the Environment and Forestry Sector of the SDC. INTERCOOPERATION and GOSLESAGENTSTVO.
- Fisher, R.J. (2000) 'Poverty Alleviation and Forests: Experiences from Asia.' Paper prepared for Workshop 'Forest Ecospaces, Biodiversity and Environmental Security', IUCN World Conservation Congress, Amman Jordan, 4-11 October 2000.
- Fisher, R.J. (2003) CFM Report 9/03 Collaborative Forest Management in Kyrgyzstan: Consolidating a new approach. Report on a mission to Kyrgyzstan 11-26 March 2003, submitted to the Natural Resources and Environment Sector of the SDC. INTERCOOPERATION and State Forest Service, Government of Kyrgyzstan.
- Forest Inventory Unit (2002) Project - Organization and Development of Forest Management of the Model Leshoz Ortok. Bishkek, State Forest Service.
- Gan, P. A. (1982) Lesnoi fonda Kirgizii za poslednie 50 let i ego sovremennoe sostojanie [Forest fund of Kirghizia during the last 50 years and its current state]. Problemy osvoenija gor [Problems of the opening up of mountains]. Frunze.
- Goslesagentsvo (1996) Walnut-Fruit Forest Action Plan. Bishkek and Bern, Kyrgyz Government and Intercooperation.
- Goslesagentsvo and LES-IC (1997) Short description of the Kyrgyz Leshozes. Bishkek, Kyrgyz-Swiss Forestry Sector Support Programme.
- Government of Georgia (2000) Poverty Reduction and Economic Growth Programme of Georgia. Intermediary Document. Tbilisi, Government of Georgia. 46 pages.
- Government of Georgia (2002) Statement of the Government of Georgia. Main Principles of Government Policy for Georgia's Forest Sector Development in 2002-2010. Approved by the State Minister of Georgia in May 14, 2002. Tbilisi, Government of Georgia.
- Government of Georgia (2003) Economic Development and Poverty Reduction Programme of Georgia. Tbilisi, Government of Georgia.
- Government of the Republic of Tajikistan (2002) Poverty Reduction Strategy Paper. Dushanbe, Government of the Republic of Tajikistan.
- Heleniak, T. (1997) The Changing Nationality Composition of the Central Asian and Transcaucasian States. *Post-Soviet Geography and Economics* 38(6): 357-378.
- International Crisis Group (2002) Kyrgyzstan's political crisis: an exit strategy. ICG Asia Report N°37. Osh/Brussels, ICG International Crisis Group.
- IRAN-UNEP-FAO Initiative (1999) Low Forest Cover Country (LFCC) Meeting 4-8 October 1999 in Tehran, <http://www.lfccc.net/concept.htm>, (20.01.2004).
- Kubicek, P. (1998) Authoritarianism in Central Asia: curse or cure? *Third World Quarterly* 19(1): 29-43.
- Kyrgyz Republic (2001) Interim National Strategy for Poverty Reduction 2001-2003.
- Kyrgyz Republic (2003) Expanding the Country's Capacities. National Poverty reduction Strategy 2003-2005.

Laboratory of Forest Policy ENGREF (2001) The Introduction of Sustainable Integrated Management of Juniper Forests in South Kyrgyzstan (Central Asia - former USSR) - JUMP (JUniper forests Management Plans). Project proposal submitted to the European Commission. Nancy, Laboratoire de Politique Forestière de l'Ecole Nationale du Génie Rural, des Eaux et des Forêts (ENGREF).

Le Houérou, H. N. (2000) Restoration and Rehabilitation of Arid and Semiarid Mediterranean Ecosystems in North Africa and West Asia: A Review. *Arid Soil Research and Rehabilitation* 14: 3-14.

Marti, A. (2000) 'Stakeholders and local resource management in the Walnut Fruit Forests of Southern Kyrgyzstan. Final Report on Fieldwork Conducted June – December 1999.' Submitted to Intercooperation and SDC.

Matsuzato, K. (2001) An island of democracy? Local reforms in Kyrgyzstan 1990-2000. *Central Asia and the Caucasus* 4(10): 142-154.

Messerli, S. (2002) Agroforestry - A way forward to the sustainable management of the Walnut-Fruit Forests in Kyrgyzstan. *Schweizerische Zeitschrift für Forstwesen* 153(10): 392-396.

Müller, U. and Sorg, J.-P. (2001) Gestion multifonctionnelle des forêts de noyer du sud du Kyrgyzstan: tradition, problèmes actuels, perspectives. *Schweiz. Zeitschrift Forstwesen* 152(3): 138-144.

Müller, U. and Venglovsky, B. I. (1998) L'économie des forêts de montagne dans l'Ex-URSS: l'exemple du Kirghizistan. *Revue Forestière Française* numéro spécial: 148 - 160.

National Statistical Committee (1999) Results of the First National Population Census of the Kyrgyz Republic of 1999, <http://stat-gvc.bishkek.su/English/Population/Default.html>, (20.01.2004).

Pomfret, R. (1995) *The economies of Central Asia*. Princeton, New Jersey, Princeton University Press.

Pswarayi-Riddihough, I. (2002) *Forestry in the Middle East and North Africa: an implementation review*. Washington, D.C., The World Bank.

Republic of Armenia (2003) *Poverty Reduction Strategy Paper*. Yerevan, Government of the Republic of Armenia.

Republic of Azerbaijan (2003) *State Programme on Poverty Reduction and Economic Development 2003-2005*. Baku, Government of the Republic of Azerbaijan.

Roth, L. and Murzakmatova, R. (2003) *Development of a social aspect assessment in the frame of national forest typology in Kyrgyzstan*. Technical report 2003. Bishkek, KIRFOR Kyrgyz-Swiss Forestry Support Programme.

Scherrer, Yvonne (2004) *Social Aspects of CFM: The procedure of allocation of plots, the influence of CFM on the tenants' families and its gender dimension – a comparative study in two leshozes in southern Kyrgyzstan*. Final Report on Fieldwork Conducted April 2003 – January 2004. Bishkek: KIRFOR (Kyrgyz Swiss Forestry Support Programme).

Scheuber, M., Müller, U. and Köhl, M. (2000) *Wald und Forstwirtschaft Kirgistans*. *Schweizerische Zeitschrift für Forstwesen* 151(3): 69-74.

SDC (2000) Poverty – Wellbeing. An Orientation, Learning and Working Tool for Fighting Poverty. Bern, Swiss Agency for Development and Cooperation (SDC).

Ter-Gazarian, K., Karapetian, V. and Barseghian, M. (1995) Forest and forest products country profile: Republic of Armenia. New York and Geneva, United Nations.

Timber Section UN-ECE/FAO (2000) Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries. UN-ECE/FAO Contribution to the Global Forest Resources Assessment 2000. New York and Geneva, United Nations.

Tüzün, G. and Sezer, S., Eds. (2002) National Report on Sustainable Development for Turkey. World Summit on Sustainable Development Johannesburg 2002. Ankara, The National Programme on Environment and Development.

UN (2003a) Common Country Assessment. Bishkek, The UN System in the Kyrgyz Republic.

UN (2003b) The Kyrgyz Republic Millenium Development Goal Progress Report. Bishkek, United Nations, UNDP.

UNDP (2001) Community forestry: Turkey; Chapter IV - Forestry. Examples of successful initiatives in agriculture and rural development in the South. Sharing Innovative Experiences, Volume 5. New York, UNDP Special Unit for Technical Cooperation among Developing Countries: 257-264.

UNDP (2002) National Human Development Report - 2002. Human Development in Mountain Regions of Kyrgyzstan. Bishkek, United Nations Development Programme in Kyrgyzstan, National Center for Mountain Regions Development in the Kyrgyz Republic.

Venglovsky, B. I. (1998) Potential and constraints for the development of the walnut-fruit forests of Kyrgyzstan. Biodiversity and sustainable use of Kyrgyzstan's walnut-fruit forests. J. Blaser, J. Carter and D. A. Gilmour. Gland, Cambridge and Bern, IUCN and Intercooperation: 73-76.

von Maydell, H.-J. (1978) Forst- und Holzwirtschaft der Sowjetunion: Teil 3: Die transkaukasischen Republiken Armenien, Aserbeidschan, Grusinien. Mitteilungen der Bundesforschungsanstalt für Forst- und Holzwirtschaft Nr. 120. Hamburg, Bundesforschungsanstalt für Forst- und Holzwirtschaft.

von Maydell, H.-J. (1983) Forst- und Holzwirtschaft der Sowjetunion: Teil 4: Kasachstan und die mittelasiatischen Sowjetrepubliken Usbekistan, Kirgisien, Tadshikistan, Turkmenien. Mitteilungen der Bundesforschungsanstalt für Forst- und Holzwirtschaft Nr. 140. Hamburg, Bundesforschungsanstalt für Forst- und Holzwirtschaft.

World Bank (2000) Europe and Central Asia Region - Natural Resource Management Strategy. Washington, D.C., World Bank.

World Bank (2001a) Europe and Central Asia Region - Forest Policy and Strategy Note. Washington, D.C., World Bank.

World Bank (2001b) Kyrgyz Republic. Poverty in the 1990s in the Kyrgyz Republic. Washington, D.C., The World Bank, Human Development Department, Country Department VIII, Europe and Central Asia Region.

World Bank (2001-2002) *Attacking Poverty: Opportunity, Empowerment, and Security. Overview.* World Development Report 2000/2001.

World Bank (2002) *Data & Statistics. Country Groups,* http://www.worldbank.org/data/countryclass/classgroups.htm#Low_income, (20.01.2004).

World Bank (2003a) *Country Brief Kyrgyzstan,* <http://www.worldbank.org.kg/ECA/Kyrgyz.nsf/ECADocByUnid/5D1C02A085120E6BC6256DC1001063F0?Opendocument>, (01.02.2004).

World Bank (2003b) *Kyrgyz Republic at a glance - 20.8.03,* http://www.worldbank.org/data/countrydata/aag/kgz_aag.pdf, (20.01.2004).

World Bank (2003c) *World Development Indicators 2003. Online databases,* <http://devdata.worldbank.org/data-query>, (01.02.2004).

World Bank (2004) *Georgia Forests Development Project,* <http://lnweb18.worldbank.org/ECA/GFDProject.nsf>, (20.01.2004).

Wunder, Sven (2001) *Poverty Alleviation and Tropical Forests – What scope for Synergies?* *World Development*, Vol 29 (11): 1817-1833.

Yachkaschi, A. (1992) *Forst- und Umweltprobleme im Iran.* Frankfurt am Main, J.D. Sauerländer's Verlag. 107 pages.

NOTE ON SOURCES OF INFORMATION

This paper presents an overview of the relationships between forest resources, forest policy and poverty in Kyrgyzstan and it makes some reference to the implications of what is happening in Kyrgyzstan to other countries in the West and Central Asian Region. While the paper deals with the linkages between forests and poverty in Kyrgyzstan as a whole, it pays particular attention to the experiences of the Collaborative Forest Management activities taking place in the walnut fruit forests in southern Kyrgyzstan. These activities commenced in 1998 as a sub-project of the Kyrgyz-Swiss Forestry Support Programme (KIRFOR). The sub-project is known as the Collaborative Forest Management Project and is implemented by the Swiss NGO Intercooperation on behalf of the Swiss Agency for Development and Cooperation (SDC).

The authors of this paper each have a close association with the project and the paper presents their experience and analysis of the poverty implications of the project. While the paper draws heavily on project experience, opinions expressed are not necessarily those of either Intercooperation or SDC.

Much of the data on field level activities has been collected as part of postgraduate research by Kaspar Schmidt (PhD candidate, University of Reading, UK) and Nurlan Akenshaev (Master's degree candidate, Kyrgyz National University). Similarly, analysis and interpretation of this data forms part of their degree work and this paper acknowledges their intellectual contribution.

ACKNOWLEDGEMENTS

The authors wish to thank the following for useful comments on earlier drafts of this paper: Jean-Marie Samyn, Jane Carter, Carol Colfer, Jon Lindsay and Jean Louis Blanchet. We also wish to thank David Palmer (FAO) for his support in the preparation of the paper. Finally we wish to thank our other colleagues in Kyrgyzstan, especially Ennio Grisa and the staff of KIRFOR for their professionalism and enthusiasm for the work of CFM.

The research project Kaspar Schmidt and Nurlan Akenshaev are engaged in is funded through the Research Fellow Partnership Programme (RFPP), an SDC initiative managed by the Centre for International Agriculture (ZIL) at the Swiss Federal Institute of Technology Zurich (ETH Zurich). It receives additional support from the Kyrgyz-Swiss Forestry Support Programme KIRFOR, the Forest Institute of the Kyrgyz Republic, CIFOR's research programme on Adaptive Collaborative Management (ACM), British Council and the ORS Award Scheme.

ABOUT THE AUTHORS

Robert Fisher is an anthropologist with interests in community-based natural resources management (especially community forestry) and in the connections between natural resources, livelihoods and poverty. He is currently working on a book on poverty and conservation with IUCN The World Conservation Union. He is an Honorary Associate in the Division of Geography, School of Geosciences, University of Sydney. Email: rjfisher@ozemail.com.au

Kaspar Schmidt is a forest scientist currently pursuing his PhD studies at the International and Rural Development Department at the University of Reading, UK. He belongs to the Group for Forestry and Development, Chair of Silviculture, Department of Environmental Sciences at the Swiss Federal Institute of Technology Zurich (ETH Zurich), Switzerland, and is leader of the RFPP research project on local knowledge and forest management strategies in the walnut-fruit forests in Kyrgyzstan. email: kschmidt@swissonline.ch

Brieke Steenhof is a forester specialising in community forestry. Since early 2001, she has been based in Kyrgyzstan as CFM Project Leader, Intercooperation, Ul. Jamasheva 1, Sputnik, Djalal-abad, 715611, Kyrgyzstan. Tel/fax: +996 3722 5 31 69; email: jalabad@mail.elcat.kg

Nurlan Akenshaev, who grew up in Ortok leshoz, is an MSc student in economics at the Kyrgyz National University and conducts socio-economic research in the framework of the RFPP research project, c/o Laboratory of Forest Resources, Forest Institute of the Kyrgyz Academy of Science, Ul. Jamasheva 1, Sputnik, Djalal-abad, 715611, Kyrgyzstan. Tel/fax: +996 3722 5 31 69; email: ak_nurlan@mail.ru

Further information about the LSP

The Livelihood Support Programme (LSP) works through the following sub-programmes:

Improving people's access to natural resources

Access of the poor to natural assets is essential for sustainable poverty reduction. The livelihoods of rural people with limited or no access to natural resources are vulnerable because they have difficulty in obtaining food, accumulating assets, and recuperating after shocks or misfortunes.

Participation, Policy and Local Governance

Local people, especially the poor, often have weak or indirect influence on policies that affect their livelihoods. Policies developed at the central level are often not responsive to local needs and may not enable access of the rural poor to needed assets and services.

Livelihoods diversification and enterprise development

Diversification can assist households to insulate themselves from environmental and economic shocks, trends and seasonality – in effect, to be less vulnerable. Livelihoods diversification is complex, and strategies can include enterprise development.

Natural resource conflict management

Resource conflicts are often about access to and control over natural assets that are fundamental to the livelihoods of many poor people. Therefore, the shocks caused by these conflicts can increase the vulnerability of the poor.

Institutional learning

The institutional learning sub-programme has been set up to ensure that lessons learned from cross-departmental, cross-sectoral team work, and the application of sustainable livelihoods approaches, are identified, analysed and evaluated for feedback into the programme.

Capacity building

The capacity building sub-programme functions as a service-provider to the overall programme, by building a training programme that responds to the emerging needs and priorities identified through the work of the other sub-programmes.

People-centred approaches in different cultural contexts

A critical review and comparison of different recent development approaches used in different development contexts is being conducted, drawing on experience at the strategic and field levels in different sectors and regions.

Mainstreaming sustainable livelihoods approaches in the field

FAO designs resource management projects worth more than US\$1.5 billion per year. Since smallholder agriculture continues to be the main livelihood source for most of the world's poor, if some of these projects could be improved, the potential impact could be substantial.

Sustainable Livelihoods Referral and Response Facility

A Referral and Response Facility has been established to respond to the increasing number of requests from within FAO for assistance on integrating sustainable livelihood and people-centred approaches into both new and existing programmes and activities.

For further information on the Livelihood Support Programme,
contact the programme coordinator:
Email: LSP@fao.org

LSP WORKING PAPERS to June 2004

- Baumann P., (July 2002) **Improving Access to Natural Resources for the Rural Poor: A critical analysis of central concepts and emerging trends from a sustainable livelihoods perspective.** FAO, LSP WP 1, Access to Natural Resources Sub-Programme.
- Cotula L., (August 2002) **Improving Access to Natural Resources for the Rural Poor: The experience of FAO and of other key organisations from a sustainable livelihoods perspective.** FAO, LSP WP 2, Access to Natural Resources Sub-Programme.
- Karl M., (August 2002) **Participatory Policy Reform from a Sustainable Livelihoods Perspective: Review of concepts and practical experiences.** FAO, LSP WP 3, Participation, Policy and Local Governance Sub-Programme. Also available in Spanish and French.
- Warren P., (December 2002) **Livelihoods Diversification and Enterprise Development: An initial exploration of Concepts and Issues.** FAO, LSP WP 4, Livelihoods Diversification and Enterprise Development Sub-Programme.
- Cleary D., with contributions from Pari Baumann, Marta Bruno, Ximena Flores and Patrizio Warren (September 2003) **People-Centred Approaches: A brief literature review and comparison of types.** FAO, LSP WP 5, People-Centered Approaches in Different Cultural Contexts Sub-Programme. Also available in Spanish and French.
- Seshia S. with Scoones I., Environment Group, Institute of Development Studies, University of Sussex, UK (November 2003) **Understanding Access to Seeds and Plant Genetic Resources. What Can a Livelihoods Perspective Offer?** FAO, LSP WP 6, Access to Natural Resources Sub-Programme.
- Biggs S. D., and Messerschmidt D., (December 2003) **The Culture of Access to Mountain Natural Resources: Policy, Processes and Practices.** FAO, LSP WP 7, Access to Natural Resources Sub-Programme.
- Evrard O., (Janvier 2004) **La mise en oeuvre de la réforme foncière au Laos : Impacts sociaux et effets sur les conditions de vie en milieu rural** (with summary in English). FAO, LSP WP 8, Access to Natural Resources Sub-Programme.
- Ellis F., Allison E., Overseas Development Group, University of Anglia, UK (January 2004) **Livelihood Diversification and Natural Resource Access.** FAO, LSP WP 9, Access to Natural Resources Sub-Programme, Livelihood Diversification and Enterprise Development Sub-Programme.
- Hodgson S., (March 2004) **Land and Water – the rights interface.** FAO, LSP WP 10, Access to Natural Resources Sub-Programme.
- Mitchell R. and Hanstad T., Rural Development Institute (RDI), USA, (March 2004) **Small homegarden plots and sustainable livelihoods for the poor.** FAO LSP WP 11, Access to Natural Resources Sub-Programme.
- Hanstad T., Nielsen R., Brown J., Rural Development Institute (RDI), USA, (May 2004) **Land and Livelihoods: Making land rights real for India's rural poor.** FAO LSP WP 12, Access to Natural Resources Sub-Programme.
- Fisher R.J., Schmidt K., Steenhof B. and Akenshaev N., (May 2004) **Poverty and forestry : A case study of Kyrgyzstan with reference to other countries in West and Central Asia.** FAO LSP WP 13, Access to Natural Resources Sub-Programme.