

# **Land Reform and Rural Livelihoods**

## ***Case of the Kyrgyz Republic***

A thesis submitted to the University of Manchester for the degree of Master of Science on Environmental Science, Policy and Management in the Faculty of Earth, Atmospheric and Environmental Sciences.

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## **List of Abbreviations**

**KR** Kyrgyz Republic

**NSC** National Statistical Committee

**SLF** Sustainable Livelihood Framework

**WB** World Bank

**MDG** Millennium Development Goals

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## **Abstract**

The main aim of this thesis is to analyze the land reform in Kyrgyzstan in terms of its impact on livelihoods of rural people. The land reform was initiated and implemented in Kyrgyz Republic as a part of transition to market economy. The state owned land managed through state collective farms was disintegrated and distributed to rural people as land shares. The size of the land was determined according to the land availability and number of people on certain territory. Present, Kyrgyz Republic has mainly agrarian economy sharing one third of its GDP, 64 percent of the population lives in rural areas and half of it is engaged in agriculture. Although the macro economic agricultural data shows the positive results, there also some issues resulted from land reform. These are the high land fragmentation, subsistence based farming and land degradation. Literature review and field work through interviews and questionnaire survey have been implemented in order to investigate this issues. The work resulted that in rural areas people do not see the agriculture as a possibility for employment. They are focused and able basically produce for their home consumption. The land conservation is not considered and people are not very willing for land consolidation. This work might be helpful for the any potential projects working on land or agriculture development in Kyrgyzstan, as well as for the government in developing the country development strategies.

**Declaration**

No portion of this work referred to in this thesis has been submitted in support an application for another degree or qualification of this or any other university or other institute of learning.

**Dinara Abjamilova**

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## Chapter I

### 1. Introduction

#### *1.1. Background to the research*

During the Soviet Union in all the member countries the land was state owned asset and its use was centrally planned (Bloch 2002). The land reform policy was introduced in most of the member countries including the Kyrgyz Republic after the collapse of the Soviet Union as part of the transition to market oriented development (Osmonkulova 2006).

During the Soviet System agricultural production was nationalized characterized by state and collective owned land and private land tenure was not allowed. The large scale farming was believed as an advantageous and more efficient way of production. Land, as well as water and means of production were the property of the state and it was conceptualized that everyone is owner if everything (Bloch 2002). Throughout the Soviet Union countries about 85% of the arable land was state owned with 99 percent of land state owned by the Kyrgyz Republic (Bloch 2002).

The productivity of Soviet agriculture was low but the input use was the same as in industrialized countries and the production was based on monoculture and highly dependent on input as chemical fertilizer, machinery and subsidies, which was no ecologically sustainable or economically viable (Ludi 2003). Inefficiency and growth of output was based only on heavy asset, large amount of subsidized resources which were accompanied with free riding, moral hazard, monitoring costs which outweighed the alleged outcomes (Lerman 1999). The labor productivity was lower in Soviet Union. In spite of its impressive physical growth rate was not particularly efficient, this is

evident from the food shortages in the Soviet Union and from the results of quantitative analyses that show very low return to the high capital investment (Kriss 2003).

At the beginning of 1989-1990 after the disintegration of the Soviet System, all member countries entered the transition period with a common heritage in agriculture (Lerman1999). This transition from centrally planned economy to the market based economy was based on transferring the land tenure to individuals in rural areas and developing the small scale private farms (Lerman 1999). However the land tenure is not identical with land ownership, and some countries in the region have retained the Soviet principle of state ownership of agricultural land. Privatization of land in ECE and FSU countries follows two different procedures (Lerman 1999). Most of the ECE countries and the Baltic States have restituted land to former owners while the rest of the FSU, the Commonwealth of Independent States have adopted the strategy of distributing land to workers, without any payment (Lerman 2006). This distribution of land to workers in the CIS is implemented in two ways. One way was the distribution of physical plots to households in collectives and independent family farms outside collectives, which could be privately owned or given as use right. But this land plot is considered as in individual tenure. The second way was based on share distribution mechanism, where the physical land plots are not allocated. The land plots rather stay in collective cultivation and the owner of the shared land plot can withdraw it anytime to establish a private farm. These land shares are not classified as a land in individual tenure (Lerman 2006).

The percentage of individually cultivated land has been increasing in Trans Caucasian countries especially and in the Kyrgyz Republic among the Central Asian countries (Lerman 2006).

Specifically individually cultivated private farms have increased in countries such as Armenia, Georgia, Azerbaijan (Lerman 2006, Spoor 2007). Central Asian countries such as Kyrgyzstan,

Kazakhstan and Tajikistan have the high percentage of the individual private farms but still there some number of collective and state farms is remaining. The increase in number of the individual private farms was accompanied by the increase in the agricultural production also between 1990 and 1996(Spoor 2006).

Since the decision for the land use strategies was taken not by the central planners anymore but by many smallholder farmers, the introduction and implementation of the land reform, and establishing the private land ownership have influenced on the livelihoods of the rural population in the above mentioned countries as well as on land use for the agricultural production. Since the inter exchange agricultural policy and subsidies provided for the agriculture have been disintegrated, the countries of Transcaucasia and Central Asia have experienced the decrease in agricultural production by mid of the 1990s. It resulted in worsening of the income distribution and in increased poverty level in these countries (Spoor 2006, Shigaeva 2007). Specifically Kyrgyzstan and Tajikistan dropped to between 40-55 percent in their GDP comparing to their 1990 level (Spoor 2006).

Particularly the decrease in agricultural production had an adverse impact on the livelihoods of the rural population which made up the larger portion of the total population of the countries under consideration. Among these countries Tajikistan has the largest number of the rural population with 76% of its population being rural, while Armenia has the least number of rural populations, which was only 24% (Spoor 2006). The percentage of the rural population, the share of agriculture in GDP and the availability of the arable agricultural land correlates with the income level of the population (Spoor 2006). The fact that most of the rural inhabitants depend on limited arable land and there is no other non farm activities in rural areas also explain the continuation of the rural poverty (Spoor2006).

The consequences of changes in land reform and agricultural production more profoundly felt in mainly agrarian economies like Kyrgyzstan. The main reason of this result is that in the Kyrgyz Republic 65 percent of the population lives in rural areas and 53% of them are considered to be able bodied (MDG report 2003). Agriculture is one of the main sectors contributing to the economy of the country which is responsible for the one third of the GDP, in 2005 it was estimated that agriculture account for 35.3 percent. Moreover it is the important source of income and employment for rural households with involving the half of the economically active rural population (MDG report 2003). However, in the Kyrgyz Republic only 7 percent of the territory is arable and the irrigated land constitutes the 2/3 of the total arable land (USAID 2006). The scarcity of arable and irrigated land in the country resulted in highly fragmented shares of the agricultural land for the rural households. This is especially an important issue on the southern part of the country where the land is less available with dense population (UNCCD 2006).

Moreover, Kyrgyz people have a less tradition of individual farming as people were practicing migratory or semi migratory pastoralism before joining the Soviet Union and accordingly they have little experience with agricultural farming and skills, especially with private farming (Shigaeva 2007, Ludi 2003). The technology and input structure development in land reform implementation was a factor influencing the land use and agricultural production in rural livelihoods. As agriculture is heavily asset dependent rather than labor intensive. The experience of other FSU countries shows that the labor intensive agricultures have progressed further in land reform (Swinnen and Heineg 2002). After the collapse of Soviet Union and cease of export and import relations among the former Soviet member countries forced the country for the struggle to ensure the self efficiency in food production (International Labor Review 1993).

With land being a fundamental input into agricultural production its direct link to the way people make a living can not be underestimated (Susan 1994). In developing countries especially the agrarian one, three out of four people living in rural areas directly or indirectly depend on agriculture as a subsistent for their livelihoods. Among the Millennium Development Goals, agricultural development is seen as a crucial tool for reducing the number of people suffering from extreme poverty and hunger by 2015(MDG). Besides ensuring the development and food security, land use for agriculture might cause the negative or positive impacts on the environment like depletion of the underground water, cause of water scarcity, cause of soil exhaustion, agrochemical pollution and global climate change (WDR 2008). To make social and economic development successful, it has been argued that access to land through land reform, should be integrated with other state programs to make sure that property owners have an access to markets, credit and selection of the land reform beneficiaries should be transparent and participatory(Deninger 2004).

In neo-liberal discourses tenure security is premised around the ability of an individual household to make decisions on their land based on market determinants (de Soto 2000). Freehold tenure is seen as the most ideal form of tenure as it is known to create efficiency gains in land use. Land always goes to those who are best able to use it – assuming perfect market conditions (Spoor 2006). When the new post-soviet state emerged it embraced neo-liberal reforms as a way of stimulating efficient use of land as a productive resource. Between 1990 and 2000 the total percentage of agricultural land in individual use increased for 24.9% in countries such as Armenia, Kazasktan, Georgia and Azerbaijan (Lerman 2006). In the Kyrgyz Republic the number of the individual private peasant farms reached up to 296 000 small farms who now own their individual farms (NSC 2006). A key question though is whether the new private land ownership is contributing to the households

livelihoods.

This research project aims to examine the effects of the post-Soviet land reform program on rural livelihoods since 1991 with specific case of the Kyrgyz Republic. A key focus of this study is establishing whether the post-soviet land use system and the emerging patterns of use have given individual households sustainable livelihoods. According to Ellis (2000) livelihoods are described as sustainable if: Households can make a living at or above the minimum expected in a particular region; the activities for making a living do not compromise the local environment. This study will therefore of necessity interrogate sustainable livelihoods at these two levels: the human and the physical environment. Specific objectives of this study therefore are:

### ***1.2. Aim and Objectives***

The Objectives of the research project are:

- a. Describe and analyze the land reform policy and practices in Kyrgyzstan
- b. Assess the emerging outcomes of land reform on rural land use.
- c. Investigate the impact of rural land reform on rural livelihoods.
- d. Suggest recommendations for sustainable rural land use and livelihood development in Kyrgyzstan.

This research project aims on analyze the impact of land reform on rural livelihoods in the Southern part of the Kyrgyz Republic and on land use for agriculture. The work fills an important gap in our understanding of the agrarian impacts of the post-Soviet restructuring. Since implementation of the land reform many studies have been done on emerging macro-economic trends but few have focused on how the reforms have affected the way households make a living. Since rural livelihoods are heterogeneous rather than homogeneous, different household have responded in different ways to the changes in land tenure with consideration of their abilities, capabilities and assets. This work is different as it will seek to show how people are making a living in a household level with reference to their private land ownership, the diversification of the rural livelihoods and reasons and factors behind them. The livelihood strategies of the households with focus on their land use strategy consideration.

### ***1.3. Structure of the dissertation***

This dissertation is structured as follows.

Chapter one has introduced this work and outlined the objectives. The second chapter will start by briefly discussing the discourses on land as an important asset for the livelihoods in agrarian economies, the freehold land tenure and livelihoods, and about the theory of the small farm efficiency. Then it introduces Kyrgyzstan, histories of land use and the land reform program policy implementation. The emerging outcomes of the land reform in macro level. Then the conceptual framework will be introduced and justified in chapter four with detailed research methodology. Chapter five focuses on discussing the research findings and their implications when read with the study objectives. The last chapter, chapter six will draw out the main conclusions of this study with recommendations.

## **Chapter II**

### **Literature Review**

#### ***2.1. Land as a basis for livelihoods in agrarian economies***

The literature on land reforms and livelihoods bifurcates into two main threads. On the one hand are those who suggest that land only plays a permissive role in giving people a living in agrarian economies. They therefore suggest that land is simply a base from which people organize their livelihoods pursuits that could include agriculture and a lot of other non-agricultural enterprises (eg Ellis 2000, Bryceson 2004). On the other hand are some like Lipton (1985) who sees land as an important determinant of livelihoods security. The section below briefly reviews the importance of land as a natural asset, freehold tenure and livelihoods, small farm efficiency then with discussion of



the land reform in Kyrgyzstan.

Land is a fundamental livelihood asset which provides shelter, food production and other livelihood activities. Particularly land is a main asset for growth and poverty reduction in agriculture based countries through providing the agricultural activities (WDR 2008, Pardey 2006). In most of the developing countries agriculture is the main factor for growth, employment and rural livelihoods (DFID 2002). However safe and secure land availability is only primary condition for reducing poverty. In order to develop and ensure better livelihood opportunities and poverty reduction land reform policies should be accompanied by the improved access to services, health, education, skills, finance and transport, knowledge, technologies and markets (Rosegrant 2007). Making the smallholder farming more competitive, sustainable, diversifying income sources and facilitating migration to non farm activities are also important factors to achieve sustainable livelihoods. Access to water and irrigation is the major determinants of the land productivity and stability of yields (WDR 2008).

The accessibility and availability of the assets determine the household ability to engage in agriculture and improve livelihoods. The basic and primary assets for the successful agriculture are the land, water and human capital. Additionally developing the land markets, such as rental markets assist rural households to diversify their income and exit from agriculture. Development of the progressive land markets is important to for transferring of the land to the most productive users and to engage in non farm sector. Land reform can reduce the land distribution inequalities, increase efficiency and give opportunity for smallholder's entry into the market (WDR 2008).

## ***2.2. Freehold tenure and Livelihoods***

Equitable land distribution is basis for poor to benefit from broad based economic growth. Secure access to land and freehold tenure promotes the investment for better livelihoods and for improving livelihoods (Deininger 1997). Guaranteed land rights reduce household vulnerability and basic level of self provisioning and supplementary income. The land and the investment made for it might be the only capital they have for many rural livelihoods. Particularly through agricultural activity it can enhance and accelerate growth. Moreover the land policies with secure tenure are important factors determining the environmental impacts and recourse management (Ghimire 2001, World Bank 2001).

Land policies and implementing institutions should ensure the equitable basis for investment and land development with consideration that poor people gain new livelihood opportunities and that their rights are protected. Moreover land policies and institutions affect the land use practices. The possibility to sell and lease the land serves as a safety net for poor households which cannot farm themselves. The highly unequal land ownership gives only few opportunities for poor and the profit might be taken away from them (Deninger 2000). However the equal land distribution and secure land tenure benefits the people if they can participate in wider development through better access to input and product markets including saving and credit, to have an access to technologies for higher and sustainable productivity, education and skills to use new technology other opportunities besides agriculture, improved tenancy, equitable opportunities for private sector and better terms of trade for agricultural producers (Toulmin 2000, DFID 2002).

Soto sees the property rights as a solution for poverty and need for capital accumulation in poor countries. He concludes that the formal titling enables the informally held property to be mortgaged so as to “unlock the hidden capital assets of the poor”(de Soto 2000).

### ***2.3. Small farms and large state farms***

Small farms are more productive than larger states (DIFD 2002). Small farms play important role in many developing countries and their future is linked with the future possibilities for the agricultural sector. Agriculture might be a central sector for development, though the small farms should not always necessarily take the central role. It has been proven that the improving the productivity of the small farms contributes for poverty reduction, hunger and raises the rural livelihoods (Dyer 1991). There are two principal considerations for the favor of the small farming. These are the efficiency of the small farms and opportunity for poverty reduction and for equity (Hazell 2007).

Regarding the efficiency of the small scale farming, the extensive empirical evidences suggest that there are inverse relationship between the farm size and production per unit of land. Accordingly the smaller farms yield larger gross and net returns per hectare of land per year than the bigger farms. It is evident in Asia since there is land is scare than the labor. Larger farms may apply in input supply, processing of the harvest and transport. However for most farm operations large farms are weak and there may well be diseconomies that apply once production exceeds the scope and capacity of the family farm (Eastwood and Lipton 2004). Scale of farming leads to different transaction costs for different operations. Labor costs are an important part of the agricultural costs; small farms may have significant advantage over larger units (Hazell 2007, Ellis 2005).

Once agriculture becomes more intensive in transactions beyond the farm gate-buying substantial quantities of inputs and selling most of the output-larger farms may have the advantage. Small farms have the edge for less technologically advanced agriculture with low labor costs, but as economy develops and wages and the use of capital intensive technology increase, then the advantage shifts to larger farms (Hazell 2007).

With regard to equity a poverty reduction, there is a strong case for preferring small and large farms. Small farms are typically operated by poor people who use much labor, both from their own households and from their equally poor, or poorer, neighbors. Many farm surveys have shown that the smaller the holdings, the more labor unit area are applied. Moreover, small-farm households have more favorable expenditure patterns for promoting growth of the local nonfarm economy, including rural towns. They spend higher shares of incremental income in rural nontraders than large farms, thereby creating additional demand for the many labor intensive goods and services that are produced in local villages and towns. These demand driven growth linkages provide greater income earning opportunities for small farms and landless workers among others (IFPRI 2005).

Changes in production methods and supply chains may undermine the smallholder's efficiency in land use and affects the economies of scale. When new technologies involve higher capital inputs or mechanization or require high levels of education, they may disadvantage smaller farms reduce their transaction costs when interacting with input suppliers, makers and traders. Many high value crops require cash investment in seeds, fertilizers, and pesticides. Yet small farms are less able to obtain farm credit than large farms are able to obtain inputs in comparable prices. Small scale, undercapitalized, and often undereducated farmers find it particularly difficult to meet the quantity, timeliness, traceability and flexibility requirements of the new supply chains, even if family labor is well suited to delivering high quality products (Singh 2005, Hazell 2007).

This section has looked at the literature on Land and Livelihoods in general. Based on this discussion we can make three main observations of the literature. Firstly, that there is little contention on the fact that for agrarian economies the terms and conditions under which land is accessed makes a difference in livelihood pursuits. Secondly, while some like de Soto argue for free

hold tenure, the evidence suggests a mixed picture on whether or not this enhances people's livelihoods. Thirdly this discussion has shown that in theory small scale farms seem to provide some efficiency gains and so it would be expected that after the restructuring of farm holding in Kyrgyzstan there is an expectation of increased productivity. The next section will discuss the implementation of the land reform policies in Kyrgyzstan and its emerging outcomes.

#### ***2.4. Land reform in the Kyrgyz Republic***

This section discusses the policy context in which households make a living on land in the KR. It divides into three main sections. The first section introduces the country and relevant aspects of its history that help us to understand the contemporary livelihoods. The second section looks at the main policy and practice in land reforms in KR while the last section considers the risks and vulnerabilities that derive from the policy environment.

##### ***2.4.1. Historical land use strategies in the Kyrgyz Republic***

The modern Kyrgyz Republic is a former Soviet Union country located in Central Asia with five million populations. The land has been an important natural asset contributing for the livelihoods of Kyrgyz people for a long time in their history. Mainly the land use strategy of the country can be divided into three periods. The first period is characterized by nomadic land use system, the second period is characterized by the collective agricultural production and the third period is characterized by the private land ownership (Shigaeva 2007).



Fig.2.1. The map of Kyrgyzstan .The source: Adopted from the UN website

For many centuries Kyrgyz people have practiced the nomadic land use system and agricultural cultivation was not developed. The main food and livelihoods of Kyrgyz people were based on raising and utilizing livestock. Therefore Kyrgyz tribes would migrate to different places in search of the good pastures for grazing their livestock. On other hand in this was they were coping with climate variations. Initial agricultural development on the territory of the Kyrgyz republic started with resettlement of the Russian and Ukrainian settlers by the Russian troops in 1876 (Shigaeva 2007, Ho and Spoor 1996).

The second period characterized by collective agriculture started after the revolution in 1917. Practically all the Kyrgyz people were settled down and peasant farms were corporate into collective farms which called kolhozes. This was the first time in the history of Kyrgyz people the large scale farming and agricultural mechanization was introduced (Abazov 1999, Bloch 2002).

Agricultural farms were highly industrialized with hundreds of employees and areas of cultivated land (Eriksson 2006). Agricultural production was controlled from the above by the Ministry of Agriculture for the whole country. Each year the ministry decided on the area of land to be

cultivated, the volume of the water to be used for irrigation, even on the gross volume of the agricultural production and yields to be produced per each hectare sown area as well as for the cost of production for each unit. These commands of the Ministry were implemented through agricultural enterprises and brigades which were the primary unit of the organization of labor (Bloch 2002). Intensification of the agriculture was excessive which was based on inter-republic compensation and exchange mechanism (Shigaeva 2007). The central planning of the agricultural production was based on accounting prices, large direct and indirect subsidies with little cost recovery. The investment decision was not justified by the financial and economic viability (Muhadar 1998).

Kyrgyz agricultural sector mainly provided meat, fruit, vegetables, cotton silk and some other technical crops for Russia's light industry. In 1979, 61.8% of the population lived in rural areas. Agricultural sector and strong extended family support network in rural areas was able to provide sufficient income for the fast growing rural population of Kyrgyzstan. However, the native rural Kyrgyz population has been primarily employed in the agricultural sector and faced increasing population pressure, shortage of arable land. Specifically the southern part of the country was more vulnerable to the mentioned issues (Abazov 1999).

Land use and agricultural production during the Soviet Union was organized in two ways through the state farms and collective farms. State farms were called as sovkhozes and the collective farms were called kolhozes. In state farms people were employed as workers and paid fixed salary as it was in the industrial sector. The cultivation was decided according to the national economic plan. While in collective farms members owned a part of the farms land and landed properties and decisions about the production was taken by the members in the general meeting with their participation. The harvested production was then distributed among the all members of the farm.

The land sizes of these farms were of different size (Eriksson 2006).

The labor within the farms was highly specialized and people were assigned different titles such as milkmaids, technicians, electricians, tractor drivers and constructors. All employed workers received a salary depending on their occupation. Manual labor was a low wage job, while drivers and technicians were relatively high paid occupations. Women were employed to carry out the different manual labor such as weeding, hay gathering (Eriksson 2006). However in order to ensure the basic food self sufficiency of the households subsistence oriented small plots of land were allocated for rural people. Although the size of the land was usually less than 1 ha, it made up 30 percent of the agricultural production in the Soviet Union from only 1.6% of the arable land (Spoor 1999). This was as one of the arguments later for the favor of land privatization and developing of smallholder farming. However the assets and all other farm inputs for the cultivation of these lands were provided by the state farms in a subsidized form which has not been considered (Eriksson 2006, Lerman 2006).

#### *2.4.2. Institutional and legal changes in the process of land reform*

This collectivized agricultural production system in Kyrgyz Republic started being dismantled after the disintegration of the Soviet Union through introducing the land reform policy in the country. In this context the land reform was based on transforming the land from state ownership to private family ownership and strengthening of the individual farming. Most of the previous collective and state farms have been dismantled and the land was distributed to the workers. The land reform was implemented in order to change the incentives for production and in this way to increase the agricultural production (Osmonkulova 2006).

The government of the Kyrgyz Republic has implemented legal and institutional changes in the



process of the land reform for the land privatization. The initial land reform policy was introduced in 1991 which was irregular until 1994. Regarding the institutions responsible for the land reform, the Ministry of Agriculture and Water Resources was responsible in national level through formulating the policies. Institutions such as Center for Land and Agrarian Reform, the state institute for land resources and land engineering developed the methodological and instructional support for the land privatization. In local level all these policies and instructions were implemented by the district state administration and by the village governments. The main responsibility of the district level state administration was the developing the reorganizational plans for lands, determining the number of land and property shares and registering them. Also it determined the amount of land to be reserved in the National State Land Fund (Bloch and Delehanty 1996).

The initial legal development for the land reform started by adopting the law on “Peasant Farms” in 1991 (Bloch and Delehanty 1996; Mudahar 1998, RDI 1998). A peasant farm is a farm run jointly by family members, relatives and other individuals. This law on peasant farm established the regulations that it can be established voluntarily, by one farm per family and it can be inherited. Peasant farm enterprise can be required by any person of legal age (18), can transfer the landownership, rent it out or give the duties to another Peasant Farm Enterprise member. However the law restricted the selling, buying, granting, mortgaging or unauthorized exchange of the land. According to law the land was levied on a fixed rate according to its quality and location. In cases of the failing to pay the taxes, and other charges the land ownership could be canceled (Bloch and Delehanty 1996; RDI 1998).

During this period the private farm organization was voluntarily and early established farms were provided by the farm inputs from the state, subsidized loans and tax exemptions. By the end of 1991 about 2000 peasant farms were established (RDI 1998). Later in April of 1991 another law “On Land reform” was adopted. This law envisaged two stages of farm

restructuring. In the first stage it considered to develop the land legislation and regulation, to develop a schedule for lease payment, designate boundaries of villages, cities and districts and create a special land fund. The special land fund was developed based on the unutilized land (Bloch and Delehanty 1996).

The second stage of the law considered the creation and monitoring of the data bank on land cadastre, to issue land passports for farmers, to introduce leases and regulate the compliance with land legislation and regulation to be monitored (RDI 1998). The presidential decree in November 1991 required all the state and collective farms with less than 15% of profitability to be allocated to the workers according the length of service and labor contribution (RDI 1998). Only starting from 1994 the reorganization of the all farms started. The presidential decree provided the 49 year fully disposable and mortgagable rights (Bloch and Delehanty 1998). It allowed right transferring, to sell, lease, exchange, bequeath or mortgage land plots. The land shares were distributed with certificate of ownership listing the name of each member free of charge to farm workers, pensioners, invalids, specified social workers. Also the maximum size of the land to be allocated was established, commodity producing enterprise should consist of at least 10 hectares of plowed land in intensive cultivation zones, 15 hectares in average zones and 20 hectares in the mountains. This regulation was established mainly to keep the crop rotation patters, irrigation system, and farms of efficient size to produce for market (RDI 1998).

The state program on land reform for 1995-1996 aimed to break up and reorganize farms by 1996. This year the rights of land shares were extended from 49 to 99 years and the condition for the maximum size of plot was changed from minimum 5 hectares in all cultivated zones. By 1997, 800 000 private family farms have been established with issuing of certificate of ownership and only 22 state farms were left (RDI 1998). Simultaneously the state control of the agricultural input and output price, market and trade control was liberalized by joining WTO. All the agro processing enterprises also has been privatized. Through the assistance of Asian Development Bank the small

credit unions have been established (Bloch and Delehanty 1996). This law provided the development of various types of farms. According to this law all the land has been classified and inventoried. Land Fund has been established for the redistribution.

During the initial period of the land reform, it was based on the voluntary reorganization of the state and collective farms. The members of the unprofitable state and collective farms could withdraw the land shares and set up private farms. The land code was adopted in 1999 and established the right to private land ownership (Shigaeva 2007).

#### *2.4.3. Emerging outcomes of the land reform*

During the Soviet Union about 20 million hectares of the land was designated for the agricultural purpose in order to achieve the food sufficiency. However, through the land reform, the land resources have been reclassified in the Kyrgyz Republic and at the end only 5.5 million hectares of the land was designated for the agricultural use (USAID 2006, MDG 2003). Of these 5.5 million hectares of the land only 2.5 million hectares are classified as possible to gain economic benefits. Of these 2.5 hectares of the land, 1.3 million hectares are arable and 1.072 hectares are irrigated land (ADB 2006). By 2006, 70% of the arable land was privatized (ADB, 2006a). As it is shown in Figure 2.2. the number of the private farms have been increasing and reached 313 061 units by 2006.

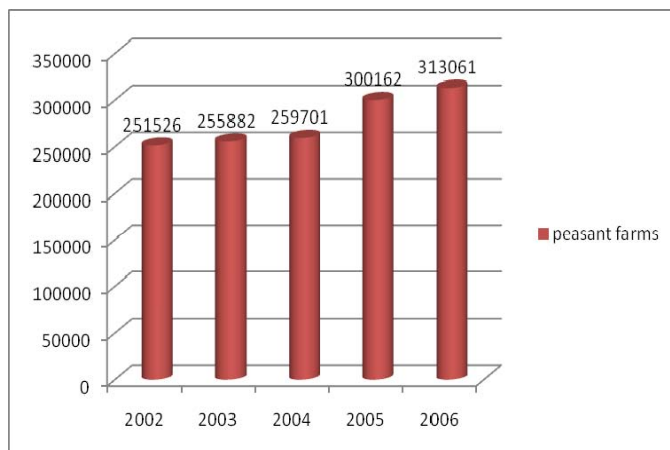


Figure 2.2. Increase in number of the private peasant farms (NSC 2006)

But the size of the privatized agricultural plots varies throughout the regions in the country. There is more land is available on the north than on the southern part of the country Agricultural production accounted for the 42% of the countries between 1988 and 1993. During this period the major agricultural crops produced included the grains, such as spring barley, winter wheat, maize, winter barley and spring wheat (Abazov 1996). Other annual crops included the potatoes, vegetables and sugar beets (Abazov). Horticultural crops such as cotton and tobacco, fruits and were produced on the southwest of the country. All the grain production was irrigated. As it is shown in figure 2.3. agriculture accounts for one third of GDP, employs 52% of the labor force in Kyrgyzstan (World Bank 2007). One third of the rural population is engaged in agricultural farming. Also the share of the small farms in total agricultural output has increased to 55% and the share of the state farms have dropped from 60% to 3.9%. However the labor productivity decreased for 37.0% (World Bank 2007).

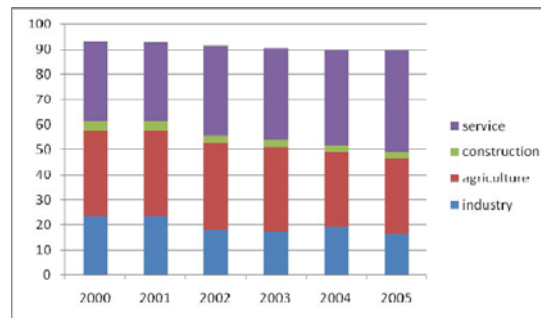


Figure 2.3. The share of agriculture in countries GDP

However between 1993 and 1994 agricultural production dropped due to the reduced access to fertilizers, pesticides, farm machinery and other input (EPR 1999). Production of grains, potatoes and vegetables dropped significantly during this time (NSC, 2006). The recovery of the agriculture started since 1996. However, the agricultural growth started increasing on the second half of the 1990s and by 2000s (ADB 2006b). The small farms produced about 95% of all agricultural output, compared to 89% percent in 1999.

The agricultural sector has experienced important fluctuations since independence, with strong contraction in 1990-1995(Howell 1996), a robust recovery since 1996 and recession in 2005(Spoor 2006). Due to the agricultural production increase between 1996 and 1999 the production level reached its output level by 1999(Babu and Reidhead, Spoor 2006). Production was mainly based on food crop production for home consumption and barter. The sown area for grain, potatoes and vegetables has been increasing since 1990(Figure 2.5). If the sown area of the grain was only 537.4 thousand ha in 1990s, now it reached to 633 thousand hectares. This shift to low –value crops is based on risk aversive strategy of the farms in order to ensure the basic food sufficiency. On other hand this strategy enhanced the increase in labor force for agricultural production and decline in labor productivity while the agricultural output increased.

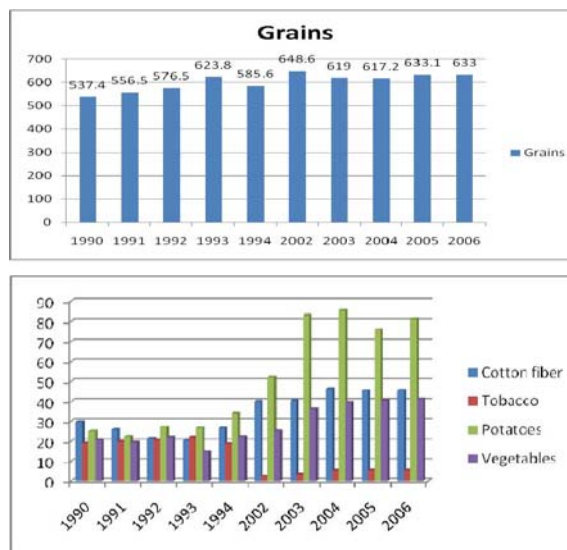


Figure 2.5. The area of the sown grains

However, as it is shown in figure 2.7 the yield of the grain has been decreasing last years. Agricultural employment accounts for two thirds of all rural employment and most of them are employed in crop production. During the following five years, the agricultural growth has been

increasing, with 4 percent increase annually. Half of the agricultural production consists of the crop production (World Bank 2007, Spoor 2006, and Strategic Matrix of the Kyrgyz Republic 2006).

By 2005, 51% of the rural population was poor and 14% of the rural poor could not provide the basic food needs (Babu and Riedhead). Moreover the inequality in consumption is increasing in rural areas. The number of rural population has been increasing since 1990 and one third of the population in Kyrgyzstan live in rural areas (Figure 2.4). Particularly the poverty is high on the southern regions of the country, where two thirds of the all rural poor live (Childress 2004, World Bank 2007). These poor people are employed in farming sector and the poverty is higher in farming sector, with 60 percent among the rural households and among the households employed in non farm sector, the poverty is only 48%(World Bank 2007).

There are no diverse job opportunities in the rural areas and the income is very low (Abazov 1996, Wold Bank 2007, Strategic Matrix of the KR). These factors are increasing the rate of migration from rural areas to the capital of the country and to the abroad. Migration and bring the external sources serves as a coping mechanism for the poor households. According to the official information, about 500, 000 Kyrgyz workers abroad, around 23% of the total labor force. Of these some 300,000 are in Russia and around 50,000 in Kazakstan(Strategic Matrix of the KR). The majority of migrants are from the rural south, including Osh, Jalal- Abad and Batken provinces (World Bank 2007). This chapter has shown that since disintegration of the Soviet Union, the land reform has been implemented in Kyrgyzstan. This process was based on voluntarily dismantling of the farms initially then followed by the mandatory policy. Although the agricultural production was declining initially, then it exceeded its 1990 output level. The number of the private peasant farms has increased significantly. However, land reform has resulted in highly fragmented small agricultural land plots. This small size of the plots traps the households in subsistence farming. Households employed only in agricultural sector are poorer than the households employed in non farm sector (World Bank 2007). It is triggering the migration to the capital city and abroad for the able bodied people. We can therefore conclude that although sound policies have been announced there have been some implementation bottlenecks that have shaped the way the policy impacts on

households. In the next chapter the conceptual framework and research methodology will be presented.

### Chapter III

#### Conceptual framework and Methodology

##### *3.1. Sustainable Livelihoods Approach*

From the late 1990s' a new approach called the Livelihoods Approach emerged as a counter framework and has become one of the main framework used in investigating livelihoods. The roots of the concept of Sustainable Livelihood Approach (SLA) goes to the Brundtland Commission Report, which first put the concept of sustainable development on the global political agenda by defining the Sustainable Development as a development that meets the needs of the present without compromising the ability of future generations to meet their own needs (World Commission on Environment and Development). This report analyses were further shared by the first Human Development Report of the United Nations which considered the development away from the macro-economic bias of earlier development thinking and shifting focus to individual and household health, education and well being.

A Sustainable Livelihood Framework is a conceptual framework, which is aimed to analyze the reasons behind the poverty, people's access to resources, their diverse livelihoods activities, and their relationship between relevant factors, at micro, intermediate and macro level (Adato and Mainzen-Dick 2002). The concept of Sustainable Livelihoods appeared in the literature in 1980<sup>th</sup>. It was originated by Robert Chambers from the Institute of Development Studies (Solesbury 2003)

A sustainable livelihood is commonly accepted as a concept:

*...the capabilities, assets, for a means for living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets*

*both now and in the future, while not undermining the natural resource base (DFID 1999a).*

The definition of the livelihoods in dictionary is “means to a living” which becomes more synonymous with the definition of the income. Chamber and Conway have developed a new definition of the livelihood which involves the capabilities, assets such as stores, resources, claims and access and activities for a means of living (Ellis2000). This definition of the livelihood links the assets and options people possess to achieve the income level required for survival (Ellis 2000).

Sustainable livelihoods framework is the core of the sustainable livelihoods approach, and its purpose is to investigate the poor people’s livelihoods with consideration of the main factors of influence. It involves the stakeholders operating in the context of the vulnerability with access to certain assets. The social, institutional and organizational environment gives the value to the access to the assets. These contexts of the vulnerability, access to assets and institutional organizations influence the livelihood strategies (Kollmair and Gamper 2002)

These framework places rural poor people at the center of the influences in inter related web. These influences affect the people decision on their livelihood strategies. Resources and livelihood assets that rural poor have and that they can access and use are the closest to the people at the center of the framework, these are the natural resources, technologies, skills, knowledge, source of credit and the network of social support. The ability of poor people to access these assets is also influenced by the vulnerability context, the economic, political and technological trends, and shock such as epidemics, natural disasters and civil strife and seasonality such as prices, production and employment opportunity. Moreover this access is also influenced by the social, institutional and political environment. All these factors at the end



determine the livelihoods of people, ways in which households combine and use their assets for their livelihoods (<http://www.ifad.org/sla/>).

Followers of the Chambers and Conway line of thinking about livelihoods have tended to identify five main categories of capital as contributing to assets in the livelihood definition, and these are natural capital, physical capital, human capital, financial capital and social capital. The ability to pursue the different livelihood strategies depends on the possessed capital, from which a different productive stream are derived, and from which livelihoods are constructed (Adato and Mainzen-Dick 2002).

In brief natural capital refers to the natural base (land, water, trees), that yields products utilized by the human populations for their survival. Physical capital refers to assets brought into existence by economic production processes, for example, tools, machines, and land improvements like terraces or irrigation canals. Human capital refers to the education level and health status of individuals and populations. Financial capital refers to stocks of cash that can be accessed in order to purchase either production or consumption goods, and access to credit might be included in this category. Social capital refers to the social networks and associations in which people participate, and from which they can derive support that contributes to their livelihoods.

The SLF provides an analytical ability to discuss the way households make a living by using five types of assets in an environment influenced by institutional and structural factors. It identifies vulnerability as a key factor that households seek to manage. These five features of the framework make it relevant for studying the livelihoods in the context of the private land ownership. It allows analyzing the rural livelihood diversification and the role of the five assets behind it. The availability of the assets and the well being of the families with focus on land use.

The land reform and rural livelihoods in the Kyrgyz Republic will be discussed and analyzed based on the concept of Sustainable Livelihoods Approach. This framework has been selected as it allows this work to be analyzed through the five features it has. It views the households making a living in a different way in which the agricultural production maybe just one. It also has the advantage that the framework allows us to see the land as just one among several different assets, capitals required to make a living. The next section discusses the methods used in operationalizing this investigation.

### ***3.2. Study methodology***

Most work on livelihoods research of necessity uses multi-method approaches to investigations. This often involves complementary use of quantitative and qualitative methods (Ellis 2000). Of necessity for this work is the need to show how macro-economic changes have affected the way individual farm households have built their livelihoods. By focusing on specific regions of Kyrgyzstan this work uses these districts as case examples to illustrate the effect of the changes on livelihoods.

#### ***3.2.1. A preliminary study***

After defining the research topic, the literature review has been conducted on previous studies done on land reform in the Kyrgyz Republic. The library data base has been searched and all the relevant literature was collected. Also the websites of the international organizations and NGO working in the Kyrgyz republic on land reform issues has been reviewed. All the reports of the international donor organizations conducted on land reform in the Kyrgyz republic have been reviewed.

#### ***3.2.2. Interviews***

After the literature review the key stakeholders in the Kyrgyz Republic responsible for land reform and land administration and management have been identified. Then the list of questions for the interviewees has been developed and the interview appointments were set up over the phone. Then the interviewing started at the beginning of the month February. The main interviews have been conducted with the representatives of the Ministry of Agriculture, Water and Processing Industry. Then interviews have been conducted with the representatives of the World Bank and USAID project working on land reform. Interviews have been conducted with the oblast and rayon departments on land administration, with the head of the soil quality monitoring station and with representatives of the local government.

### *3.2.3. Questionnaire*

Questionnaire survey has been conducted in two villages of the Osh oblast. In village Oktyabr and in village Gulistan. These villages have been selected as case study villages. The main reason for selection of these villages was the vulnerability index of these two villages comparing to all other villages in the Osh oblast. The vulnerability index of the villages explains the availability of the different resources such as land, infrastructure, and the number of people and poverty level. The selected two villages have the intermediate vulnerability index. In second these villages were closer located to the Osh.

The questionnaire has been developed right after the literature review. The questionnaire contained questions on three areas. These are on land ownership of the households and on related issues, the livelihood strategies of the households, such as income source, family welfare, then on agricultural production and land use. Also the questionnaire included the questions on availability of the assets, the land use strategies and agricultural output.

### *3.2.4. Sampling procedure*

After selecting the villages, the numbers of the total households in each village have been identified and 15% of the total households were surveyed. Every 6<sup>th</sup> household was surveyed.

### *3.2.5. Data reduction and interpretation*

After filling out of the questionnaire the data reduction and interpretation has been done. This was done by using the SPSS 14, SPSS 16 programs and Microsoft Excel.

### *3.2.6. Problems and Limitations*

Regarding the problems and limitations during the research, these were mainly the lack of enough time and very cold weather, since the questionnaire survey has been conducted on February. Also the very frequent electricity cut was also an obstacle during the work. In general people were quite polite and willing to answer for the questionnaires. However some respondents were very suspicious and did not trust since there were some detailed questions about the household. Trying to explain them the purpose of the survey was taking more time. Showing of the passport ID and student ID usually was helpful in these situations.

The chapter has also presented the framework used in this investigation as well as the methods and techniques used to gather the data used in this work. The next chapter presents the livelihoods context in the KR.

## **Chapter IV**

### **Research Findings**

This chapter presents the research findings from the small scale survey. Mainly it discusses the livelihoods of the households in rural southern Kyrgyzstan in relation with their land ownership, land use, agricultural production and household welfare. For ease of discussion it follows the assets

pentagon in the SLF. Section 1 looks at the land as natural capital which contributes to the livelihoods of the rural people. The security of the land ownership, the variety of the agricultural land size, the land use and quality of the land other related issues while section two looks at human capital, the education level of the rural people, age and household size, labor availability for the agriculture. This is followed by a discussion of the physical, economic and social capital in section three and four. In the conclusion of the chapter the livelihood strategies of households will be discussed which they develop according to the access and use of the above mentioned assets.

#### *4.1. Land as natural capital*

Natural capital is seen as the major input into any farm based livelihood strategies. During the survey, households were asked to indicate the amount of land they have, what they thought about its quality and the terms under which they hold this land. Table 4.7 shows these results. It is clear that most of the households (84%) have the agricultural land plots less than 0.80 hectares, 69% of the respondents have the land size less than 0.60 hectares and one third of the households have the land size of 0.1 and 0.30 hectares.

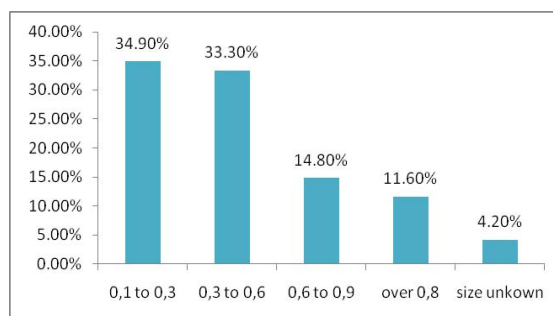


Figure.4.1. Size of the agricultural land plots

##### *4.1.1. Quantity of land*

In rural Kyrgyzstan, land is a basic and primary asset for the livelihoods, since it guarantees the

families food security and employment. As it was mentioned earlier the land shares have been allocated according to the availability of the agricultural land and number of people in certain area. The agricultural land is less available on the southern part of the country, where the survey has been conducted. In general the size of the land share differs among the families also. Some families have the bigger land size, and also able to rent additional land. Usually the families which have more members have more agricultural land allocated. Three kinds of land has been allocated, these are the irrigated land, dry land and hay making land. According to the interview with the heads of the villages, people in the villages do not cultivate the dry lands, since no irrigation infrastructure is there, and the location is too far 35-40 kilometers away, this has been indicated during the survey also, since for the current land being used, people have indicated only their irrigated shares. Also according to the interview and statistics of the Inspection of Land Quality survey have indicated that the dry lands have been left without being used.

The size of the agricultural land shares differs among the families, one fourth of the families have the land size of 0.1 and 0.30 hectares and another one third of the families have the land size of between 0.30 and 0.60 hectares. So almost more than half of the respondents have the land size in average 0.30 hectares. Only 11.6% of the people have the land size more than 0.80 hectares and all others have less. About 16.1% of the respondents rent additional land, the size of the more than 1 hectares, and other 16.6% rent land size between 0,19 and 0.34 hectares. 18.2percent of the people rent a land which is size of 0.35 and 0.60 hectares.

Besides their agricultural land shares, people have the household plots adjacent to their houses, which also serves as a small land for some subsistence farming and for the gardening. However, this land size is very small; most of the families who have allocated their land during the Soviet Union

have the larger size of the household land than the families who have received it later. So, only 1, 1% of the respondents have the land size of 0.20 hectares, other one half has the land size of between 0.15 and 0.20 hectares, and half of the respondents have the land size between 0.5 and 0.10 hectares. So in general household land size of the respondents varies between 0.5 and 0.15 hectares.

#### ***4.1.2. Quality of Land***

The quality of the agricultural land is an important factor to ensure sustainable food security for the households. Moreover in view of the absence of the other employment opportunities the land cultivation still stays as a primary employment for rural Kyrgyz. The general statistics on land degradation in the Kyrgyz Republic shows the high degree of salinization and erosion in the country since implementation of the land reform and high drop of the use of fertilizers. According to the respondent's opinion, most of them value the irrigated land and they see it as a main factor for good agricultural production. Another half of the respondents, value the land with good fertile soil and rich with nutrients. According to their own definition of the quality of the land for agriculture, only 5.4 percent of the households have assessed it as very good quality land, and 27.7 percent of the respondents define it as just good quality, other 37.2 percent of the define their land as normal quality and one fourth of the respondents think that their land quality is bad or very bad. Also majority of the respondents (53 percent) have indicated that they have problems with fertility and nutrient loss of their land and other 5.3 percent of respondents have problems with land salinization and 9 percent of the respondents have problems with land erosion and 10.2 percent of respondents have problems with land desertification. Only 24 percent of people have problems with loss of fertility. Households do not refer to any authorities for their land quality monitoring and do not get any assistance either. Of all the respondents only 5, 3 percent of the respondents have tried to assess

the quality of their land. However, during the interviewing of the village local government, they have referred that they provide educational seminars on proper land use and agricultural crop growth. However these educational seminars are intended only for the leaders of the major cooperative farms, so only these leaders attend it and there is no access for education for the majority of the small farmers.

#### ***4.1.3. Productivity***

Since 1990 the government of the Kyrgyz Republic have been encouraging and promoting the organizing of the individual household farms into cooperatives, where people consolidate their land and work together. However during the survey, half of the respondents have replied that they do not see any advantage of working in the cooperatives and in land consolidation. Other half of the respondents sees it as an advantage to have an access for the technical assistance and for the using of the fertilizers. About 8 percent of the respondents do not know anything about the cooperatives and have difficulties in answering. Families have the different strategies for their land use and for growing crops, but the main and primary reason for making decision is the self food sufficiency. Also families which keep the livestock try to grow the crops such as maize as a fodder. 24 percent of the respondents grow mixed crops such as vegetable, potatoes and cash crops such as cotton or tobacco. Other 44 percent of the respondents grow only two types of crops, by rotating them in several years, and these include the wheat, maize or cotton. Of all the surveyed households 70 percent of them grow the wheat and 50 percent of the respondents grow the maize. These two crops were the most dominant crops in agricultural land use. The size of the land is also determines the types of the crops to be grown. Households which have only small size of land and do not have livestock try to grow only vegetables. Families which do not have enough labor availability try to



grow crops which are less labor intensive such as wheat or maize. Only the families which have the land size big enough and able to invest grow the cash crops such as cotton and tobacco. According to the survey findings only 11% of the households grow the crops with intention to sell and only 25% of the households consider and practice the crop rotation. So majority of the households put the families' food sufficiency in short term as a first priority. Of all the surveyed households, only 21% of them can use their agricultural production to cover food and clothing expenses, while other 20% of the households can only cover their family food. However other half (59%) of the respondents have replied that their agricultural production can barely cover their expenses for cultivation. Moreover majority of the people (46.5%) have replied that last years their production yield has been decreasing and only 15.4% of the people have replied that they have an increase in crop yield.

#### ***4.2.4. Land Tenure***

Since land reform all the respondents have received certificates for ensuring their land rights, almost 96.3% of them and in general according to the survey people know well about their land rights, however, 44.4 percent of the respondents have replied that they know that they can only use their land, other half of the respondents did know well about their rights for their agricultural land. So in general, there are no issues related to the land tenure among the village inhabitants. Moreover, most of the respondents approve the land reform and seems happy to use their land on their own. Especially, since land became the primary and basic source of the families' food security with consideration of the countries uncertain developments, it became important for the families to decide on their own for the land use and to decide what to grow, this provides them the freedom to ensure and secure the family food sufficiency.

Also, according to the survey, people do not have any issues or problems over their land shares and

they feel quite secure about it. Only 9 percent of the respondents did have some problems with their land location that it is located on the edge of the land and the trees along the road make it shadow, which is not good for growing crops.

#### ***4.2. Human capital formation in the context of the land reform***

A key feature of the ability of households to use land is the quality of human capital available to work on it. During this investigation data on the quality of human capital were obtained via a quantitative questionnaire that sought information on the size of the households, the number of children and labor availability. This research presents findings that show that there are significant human capital constraints in Kyrgyzstan that relate to quality and quantity of labor.

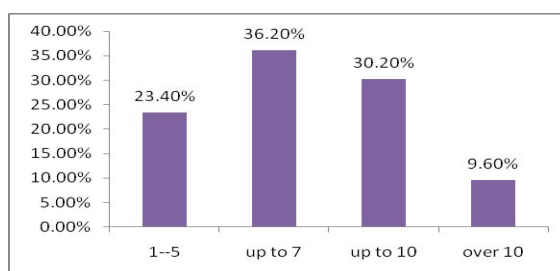


Figure 4.2. Size of the Households

Figure 4.8 and 4.9 shows that the size of the families varies and the number of children also. In average there were 7 children in the families. Most of the households had 7 members in the families, and other families have up to 10 people in their households. The maximum number of people in the households reaches up to 13 people. This is mainly because some families really have many children. In average families have 5 children in their families, majority of the respondent households have up to 5 and 8 children in their families. But traditionally in rural areas most of the elderly parent stay with the families of their children, or sometimes two families stays together which is a reason for some large size of the families. The number of children is associated with

household help, they help in small works about the household, such as bringing water, taking care of the livestock, and working in the field in summer.

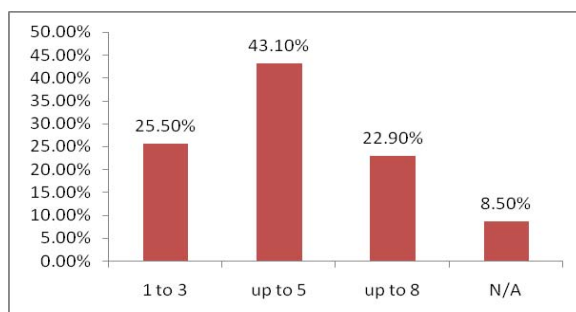


Figure 4.3. The number of children in families

According to the report of the Survey by the Trade Unions of the Agricultural Workers on child labor in the southern oblasts revealed that on average 3-4 children are involved in every hectare of cotton or rice fields, while tobacco production exploits about 7-8 children per hectare. In Jalalabad oblast alone, around 125 000 children were estimated to work in the agricultural sector. Usually there is no hired labor is used, but the agriculture is rather based on labor intensive cultivation by the members of the families, such as woman and children.

#### ***4.2.1. Quality of Labor***

According to the research it can be in general concluded that the all Kyrgyz and Uzbek families are patriarchal and the decision is made by the male head of the households especially regarding the land use. Only in the families where husbands passed away, female headed families make decision on their own, however, these families prefer to rent out the land rather than cultivating themselves.

The education level of most of the respondents was only high school education. Most of the respondents have the 10 or 11 year high school education, while others have compulsory 8 or 9 year

school education. Only 10, 1 percent of the respondents have high university education and 18.1 percent of the respondents have the vocational school education. This suggests that most people trying to make a living on the land have little or no education a factor that can explain lack of adoption of modern farming methods and aversion to innovative practices that emerged in discussions with extension workers.

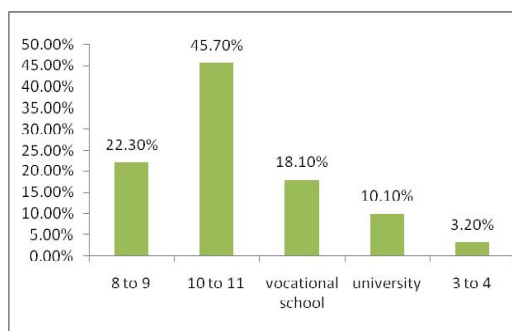


Figure.4.4. Education of the respondent

Of the surveyed respondents 50% of them were engaged in farming, while 13% of the respondents are working for an employer, 11% of the respondents are self employed and 9 % were pensioners while 17% of the respondents were unemployed. The same respondents were asked for their occupation during the Soviet Union, and the result was that 32% of the respondents were working for employer, 48% were working in collective farms and 18% of the respondents were students, while 2% of them were housewives. Respondents who were working in farms are still continuing with farming on their private land plots, while many previous state employed people and graduates are unemployed at present time due to the lack of employment opportunity.

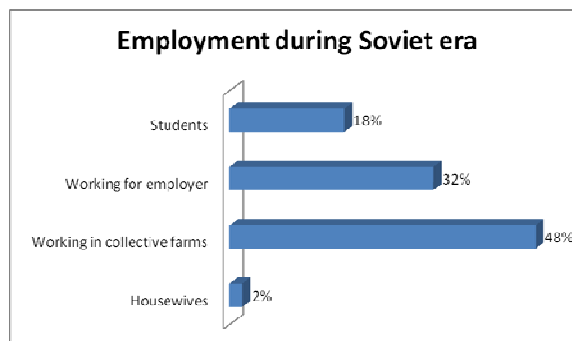
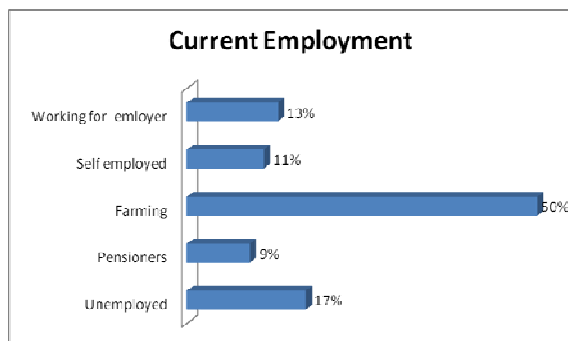


Fig.4.5. Employment of the respondents

#### *4.3. Economic and physical capital, how it influences use of the land*

Agriculture and land use is asset dependent in the country, specifically for the crops such as wheat, maize, cotton and tobacco. Vegetables and potatoes are more labor intensive crops comparing. Moreover the land use and production needs investment also. People have to pay taxes for their land share according to their land size and for the use of the water for irrigation. However most of the people have difficulties with paying the taxes on time and sometimes they pay by giving the natural products during the harvest time.

Households struggle with investment for their land use especially in spring for buying the seeds, fertilizers and renting the assets for cultivation. None of the surveyed families apply for credit, and for the question whether they would like to apply for a credit, 40% of the respondents have replied that they would like to, but other 60% of the respondents did not want to apply since they see it as risky and some other people do not want because of the religious beliefs. According to the interview with village settlement head, the application for the credit is scanned through the village head decision and usually they do not approve it if they do not see the household's ability to manage the credit. On other hand applying for credit is not very accessible for poor households, since it favors only successful farmers. According to the interview with one of the credit providing bank, credit is given only in case if the farmer has another stable income source besides agriculture. This definitely puts obstacles for poor households for making investment on their land.

Using fertilizers is also important for the land quality. At present time only the families who can

afford buy the additional fertilizer otherwise households either do not use any fertilizer or use just the manure they have from their livestock. However the use of the fertilizers are restricted only to use of the nitrogen, since other kind of fertilizers are difficult to find and costly to buy. Half of the respondents (50.3%) replied that they use nitrogen fertilizers and manure from their livestock. Other 30.9 percent of the respondents apply only nitrogen. Other 11.9 percent of the respondents apply no any kind of fertilizers and only 7.4 percent of the households use manure for improving the land quality. 55.6 percent of the households have replied that it is easy to find the fertilizers and assets for the land cultivation while other half of the respondents do not see it easy. During the research it was obvious that households are concerned with their land quality and aware about their land degradation issues and reasons behind them. However, since it requires and more input and investment they just can not afford it.

Besides the problems associated with land quality, household have indicated that they also have problems with agricultural land use such as water scarcity, lack of technical assets, of knowledge on agriculture. 19% of the respondents have replied that they do not have the good access for the irrigation, since it is not distributed on time, that they should queue for it. The scarcity and difficulties in water distribution cause problems in agro technical process, that people are not able to irrigate their crops on time. 30% of the respondents have replied that they can not access to the technical assets on time when they need, again, they have to queue for that.

#### ***4.4. Financial and Social capital***

Traditionally and moreover since period of the collectivization the social capital and reciprocal labor share has been an important part of the relations among the Kyrgyz and Uzbek families. However this relation has been changing over the last decade. The struggle of the families to

secure their livelihoods has triggered some changes in the relations. If before the families could help to each other through sharing their labor, in nowadays it is becoming different. There is no labor available for land use and for agriculture as before. According to the interview of the village head, there is a strong migration of the young people to abroad for working and there is no labor available even to hire for payment. 79 percent of the households replied that they have enough labor available for their cultivation while other 21 percent of them do not have enough labor available and usually ask their relatives to help. Respondents were mainly referring to their children as a labor force for cultivation. In some families, men go to work abroad seasonally in summer while only women and children stay and work in the field.

21 percent of the respondents have their main income from the agricultural production. 21 percent of the respondents have their main income from the livestock production. 37 percent of the respondents have their main income from the outside remittances. 5.3 percent of respondents have their income from the small business they have. 7.1 percent of the respondents have their remittances from their salary. Others get from the pensions and social security allowances for the children.

Not many households can have a surplus from their production, basically they use for themselves. Only the families who cultivate cash crops are able to sell and make cash. So only 38 percent of the respondents have production surplus from the agriculture to sell while other 68 percent of respondents do not have surplus from their production to sell.

68 percent of the families believe that land reform have helped their household welfare and 26 percent of the respondents do not feel that the land reform have helped their household well being.

#### ***4.5. Discussion***

So in conclusion the availability and accessibility of the above described five assets determine the household's livelihoods and it is welfare and particularly the use of land and benefit. According to research there are three kinds of families with different household welfare, households which live wealthy and without financial constraints and the families, which barely cover their expenses and the families who live in deprivation and have to lend money for their needs. Different factors determine the ability of the families for setting up this or that livelihood strategies. There were only 35 households in the category of the wealthy families, the main characteristics of these families are the amount of the land size, most of the households in this category have the bigger size of the land and able to rent additional land size also. The size of the land shares, 57.1% of the households have the land shares more than 0.50 hectares reaching up to maximum 1.80 hectares and 85.7% of them have the additional rented lands. The household land size varies in these categories of the families, and there is no significant difference. The main income portfolio of the families is diverse and rich, 88.5% of these households have two or three additional income sources besides agriculture such as livestock rising and remittances from abroad. The main crop types of the households however, only 22.8% practice growing the several combination of the crops, these are mainly who have smaller land sizes comparatively, and other households with bigger land sizes grow only one type of the crop. Mainly the crop type is cotton, tobacco, wheat and sunflowers. The cotton and tobacco are mainly cultivated as cash crops. The use of the fertilizers, 60% of the families in this category use both organic and inorganic fertilizers. And other 22.8% use inorganic fertilizers.

In the category of the second households, there 68 households, the size of the land in these



categories of the households is not so big comparing to the previous category, 61.8% of the households have the land size less than 0.50 hectares and only 26.4% of the households have the land share size more than 0.50 and reaching to 0.90 hectares. And only a very few households have the land size of more than 1 hectares. And 64.7 % of the families are able to rent additional land. The main income of the families 83.8% of the households has additional income besides the agriculture. The types of the crops, 33.8% of the households grow two or more than two types of the combination of the crops and all others grow one type of the crops. And the use of the fertilizers and 35.2 % of the households use only inorganic fertilizers. And 39.7 percent of the respondents use both organic and inorganic fertilizers. 8.8 percent of the households use only organic fertilizers and 8.8 percent of the households do not use any kind of fertilizers.

The third category of the households are the households with coping livelihood strategy, which live in deprivation and have to frequently lend money from their relatives for their basic livelihood needs. 80 household falls within this category of the families and the main characteristics of these households are the 62.5% of the households have the land size less than 0.40 hectares. 33.7% of the households have the land size of between 0.40 and 1 hectare, and less than 0.40 hectares. Only 55% of the households are able to lend the additional land. The household land size varies in these families. 86.2% of the families have one more additional source of the income besides agriculture in this category of the families. 32.5% of the households grow two or three types of the crops in this category of the families and all others grow only one type of the crop. The use of the fertilizers, 52.9% of the households use organic and organic fertilizers, 16.2% of the respondents use only inorganic fertilizers. 5% of the respondents use only organic fertilizers and other households do not apply any kind of fertilizers. 66 households have the land size less than 0.30 hectares, accordingly the size of the households is also not big, it is 6 or 7 people in the families, not many people with small land size rent the additional land, there were only 6 more households. Another 34 of the households have the land size between 0.60 and 0.90 hectares. Accordingly the household size is also larger in these families, 9, 9 or ten members. Only 6 households rent additional land. 16 households have the land share sizes more than 1

hectare, and these households rent the additional land size also, these households mainly grow only two types of crops, which is wheat, cotton and tobacco.

## **Chapter VI**

### **Conclusion and Recommendations**

In previous chapters the importance of the land as a natural asset for livelihoods has been discussed, with further discussions of implementation of the land reform in the Kyrgyz Republic. The development of the legal and institutional changes for the establishment of the private ownership and the current status of agricultural private land tenure has been discussed. The emerging outcomes of the land reform, such as increase in number of the smallholder farms and changes in agricultural production also have been discussed.

According to the macro level data and research findings, land reform has been conducted in a quite fair way with equal distribution of the agricultural land plots and ensuring the land ownership rights. Moreover the legal changes that have been developed so far are favorable for the livelihoods, since it allows the selling, buying, leasing, inheriting, and transferring of the land. The taxes are paid according to the size and quality of the land. The institutions responsible for the agricultural land plots are the ministry of agriculture in national level and with local government implementing in a local level.

However, as it was mentioned in the theory, the equal land distribution and land tenure are not the only factors making agricultural growth possible and for improving the livelihoods. In order to achieve the improvement of the livelihoods and agricultural growth the availability and access to other assets such as irrigation, education, savings and credit, access to technologies, access to input and output markets should be considered and developed.

The land reform policies in the Kyrgyz republic have provided the guaranteed tenancy for the

allocated agricultural plots and have allocated the land in equal way according to the size of the available land and number of people. However, since there was very little land available on the southern part of the country comparing to the northern part, and due to the dense population, the size of the allocated land plots in the south for majority of households traps them in only subsistence farming. According to the concept of land markets, the land should go to one who can make the best use of it, but since households see the land as a primary and basic asset for ensuring the food sufficiency of the family, they are not very willing to rent out their lands.

Agriculture is asset dependent in the KR which was not significantly considered during the land reform and has created the difficulties for rural farmers. All the assets of the kolхозes and sovхозes have been distributed to the people, but not everybody could have an access, which favors those who could receive an assets. There are some farms still that have pooled their assets and set up the cooperative farms together. According to the Ministry of agriculture, only the farmers who started their private farming early and who has knowledge of farming could succeed in farming.

The highly fragmentation of the land plots complicated the irrigation system, which also makes the distribution of the water difficult and water is not always available on time for irrigation. Households have to queue for water and in order to access for the assets also. Most of the households are not able to purchase fertilizers, only the affordable fertilizer is nitrogen which is used the most. Rural people use the fertilizers with aim of to increase the production rather than for soil conservation. Only families, who raise the cattle, are able to use some organic fertilizers. According to the household's observation, the degradation of the land is increasing, particularly of the fertility loss and the production is decreasing. However, there are no any specific measures taken to combat it. It seems that the only households which have an opportunity to have several income sources are

living wealthy, and the households whose livelihood is based only on farming are the most unfortunate ones. Below are given some recommendations for improving the livelihoods of rural poor and for land use.

### **Recommendations**

**1. Land consolidation** can be seen as a primary and basic factor which will also enhance the development in other sectors, such as commercialization of the agricultural production, making the credit access available and easier, giving more time for the households, easier with irrigation system, and land conservation activities. However, it has been evident from the survey, people do not see much advantage of the land consolidation and some people are not aware of it. Therefore it is important for the national and local institutions to develop the policies on delivering the rural population the benefits of the land consolidation. Moreover some incentives also should be given for people for the initial start of the land consolidation.

**2. Transparency-** it is very important to develop detailed working mechanisms of the farms based on land consolidation. Particularly the transparency of the decision for the production plays important role to promote the land consolidation. Moreover since the households depend on their farming for their food sufficiency, it is also important to consider the provision of the food through the farming in consolidated land.

**3. Access to credit-**the initial capital is necessary for the farmers, for investment in seed, fertilizers and assets, however, only if the land size is big enough than it is possible to make investment. Therefore through the land consolidation the making investment will be possible.

**4. Rural infrastructure-** the investment in the rural infrastructure is important for improving the rural education, health service, drinking water accessibility and improvement of the roads.

**5. Promoting of livestock raising-**promoting the livestock raising for poor through providing the credits will contribute both for the household's welfare and for the land fertilizing.

**6. Community based composting and fertilizing-** since the price of the fertilizers is increasing, to develop the community based local composting as a fertilizers might be beneficial with consideration of the cost effectiveness.

**7. Improving the irrigation system-**once the land will be consolidated; there will not be many fragmented plots with different crop growing, which will make the irrigation easier.

**8. Access to assets-** developing the service centers of assets will provide the easier assets for the farmers and the credit available also make it possible for farmers to purchase the technical assets.

**9. Capacity Building-**improving the education of the farmers for innovative ways of farming is also might be the good contribution for the agricultural growth.

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