Soviet Agricultural Policy and Practices in Central Asia From 1917 to 1982

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CERTIFICATE

Certified that the dissertation entitled, **"Soviet Agricultural Policy and Practices in Central Asia From 1917 to 1982"**, submitted by **Surendra Prasad Kushwaha**, in partial fulfilment of the requirements for the award of the degree of **Master of Philosophy (M.Phil)** of this university, is, to the best of our knowledge, his own work and has not been previously submitted for any other degree of this or any other university.

We recommend that this dissertation may be placed before the examiners for evaluation for award of the degree of Master of Philosophy.

Prof. Nancy Jetly
(Chairperson)

Prof. K. Warikoo
(Supervisor)

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This dissertation seeks to study the Soviet agricultural policy practices and their impact in Central Asia during the time span of 1917 to 1982. During this study, I faced many problems, which began to vanish one by one by the constant help of some persons and by the countless grace of the Supreme Being God. My supervisor Prof. K. Warikoo is the first person I am indebted to him for his constant academic help, emotional encouragement, moral support and priceless suggestions. Without him I could not have accomplished my study. In other words, I would be lost in the wilderness, if he wouldn't have given me the right direction. I am indebted to him forever and in return I can only thank him for his countless blessing, academic guidance and emotional boost. I am also indebted to the Prof. Nancy Jetly, Chairperson, CSCSEASWPS, SIS.

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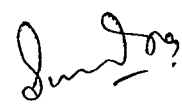

(Surendra Prasad Kushwaha)

PREFACE

As part of M.Phil programme this dissertation deals with Soviet Agricultural policies and practices in Central Asia during the period from 1917 to 1982. Prior to October Revolution, in Central Asia under the Tsarist regime the lands were basically owned by the bias (landowners), and the common people used to do agriculture either on land of landowners as labourers or on unproductive land by paying heavy taxes. Though the Tsarist Russian authorities did not alter the socio-economic system in Central Asia in any fundamental way, preferring to govern through the local feudal aristocracy, they did introduce some reforms. However these reforms did not liberate the toiling peasant from its feudal dependency and involvement. Big landowners continued to exploit the peasants, through a complex structure of agricultural taxes, tanap, virban and cattle tax, as such, agriculture in Central Asia remained under developed.

After the October Revolution the Soviets introduced agricultural reforms in Central Asia. This study is an attempt to analyse the agricultural sector in Central Asia during the Soviet regime. The 65 years from October revolution (from 1917 to 1982) covers the period of Lenin, Stalin, Khrushchev and Brezhnev and their agricultural policies in Central Asia to nationalize and redistribute the lands among the landless peasants and introduce the process of collective farming. Whereas Lenin's introduction of co-operative farming became popular in early 1920s. Stalin's coercive measures for compulsory farm collectivization and his imposing of tax on private household made a negative impact on Central Asian livestock. Khrushchev tried to reform Stalin's punitive

tax system and introduced virgin land scheme in February 1954. During the Brezhnev period, stress was laid on the scientific management of agriculture.

What this work intends to show is that how the Soviet agricultural policies reshuffled the life and times of Central Asian people and changed the agricultural economy.

Chapter one describes the geographical landscape of Central Asia and provides a historical background of land lordism, feudalism and agriculture in Central Asia.

Chapter two, deals with Soviet Socialist policies and practices. This chapter is a detailed analysis of the Soviet policies of the abolition of feudalism and land lordism in Central Asia, after the October Revolution.

Chapter three maps the process of collectivization of agriculture in Central Asia and assesses it impact on agricultural production.

Chapter four attempts to analyse the process of modernization of the agricultural sector in Central Asia. The mechanization, irrigation and other facilities were introduced in Central Asian agriculture.

Chapter five concludes this study by summing up the impact of Soviet agricultural policies as a whole on Central Asian environment, health, society and economy. This chapter tries to find out both the positive and negative impact of Soviet Agricultural Policy and Practices in Central Asia and tries to evaluate the situation of Central Asia from October Revolution to 1982.

GLOSSARY

TSIK	-	Central Executive Committee of the Congress of Soviets.
Koshchi	-	Peasants Union
Sovnarkom	-	The Council of People's Commissars
Chairikar	-	Share-cropping
Pood	-	16.38 kg
desyatins	-	2.7 acres
Oblast	-	Province
Raiyon	-	District
Batrak	-	Landless labourers
Selsoyus	-	Agricultural Society
MTS	-	Machine Tractors Station
Kolkhoz	-	Collective Farm
Sevkhoz	-	State Farm

CHAPTER I

INTRODUCTION:

HISTORICAL AND GEOGRAPHICAL BACKGROUND

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HISTORICAL AND GEOGRAPHICAL BACKGROUND

Physical Landscape of Central Asia

Central Asia encompasses large area stretching from Western Siberia in the north to Afghanistan and Iran in the South, from the banks of the Volga and the Caspian Sea in the west to China in the east. Former Soviet Central Asia which comprises mainly five states[1] - Kazakhstan, Uzbekistan, Tajikistan, Kyrghyzstan and Turkmenistan, covers an area 4 million square kilometers out of which Kazakhstan alone accounts for 2.7 million square kilometers.[2]

Strictly speaking, the term former Soviet Central Asia refers only to the four of the above mentioned five states, as Kazakhstan was not included by the Soviets in Central Asia. Kazakhstan was treated separately by both Tsarist and Soviet writers.[3] Kazakhstan can be geographically divided into two parts, the northern part and southern part, both being divided by a wide expanse of drier and less populated land. Northern Kazakhstan is closely

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[1] In the Soviet period, they were being called republics of USSR but after the disintegration of USSR they became sovereign independent states.

[2] D. Kaushik, Central Asia in Modern Times, (Moscow: Progress Publication, 1970), p.13.

[3] Kaushik, Central Asia in Modern Times, Also see, G. Wheeler, The Modern History of Soviet Central Asia, (London: Weidenfeild and Nicolson, 1964), p.1.

related physically and culturally to adjacent western Siberia in Russia and the southern part of the Kazakhstan is closer to the adjacent Central Asia.[4]

The entire region has extremely varied climatic and natural conditions. In the west and north there are extensive plains; in the east and south a considerable part of the territory is mountainous, having a great mountain chain from Kopet-Dagh in the south-west to the Pamirs and Tien-Shan in the east. The climate in the north is moderate, while in the south it is hot becoming intensely dry in summer. The mountain tops are covered with snow all the year round, and in valley of the Amu-Darya in Termez the temperature rises up to 50°C in summer. In the central Tien-Shan and Pamirs the average temperature in July is +5° and +14° respectively falling to -47°C in winter.[5] Except in the mountain regions, heavy snow-fall is rare. Powerful winds are a common feature of the semi-desert and desert area. Due to its varied climatic condition Soviet geographers divided Central Asia and Kazakhstan into four regions:[6] (i) the *steppe* constituting northern Kazakhstan or virgin lands region; (ii) the *semi-desert* consisting roughly of the rest of Kazakhstan; (iii) the desert region lying to the south of the semi-desert and reaching the Persian frontier in the west and the Chinese frontier in the east. (iv) The mountain region of the Pamir and the Tien-Shan .

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[4] Paul E. Lydolph, Geography of the USSR, (Second edition), (London: John Wiley, 1970), p.217.

[5] D. Kaushik, Central Asia in Modern Times, p.14. Also see, G. Wheeler, The Modern History of Soviet Central Asia, op.cit., p.4.

[6] G. Wheeler, The Modern History of Soviet Central Asia (London: Weidenfeild, 1964), p.2.

Central Asia has been known for its agricultural production through history, as it has good soil, climate and water. Wherever there is water there are lush green fertile oases.

Soil

Most part of Central Asia has inorganic soil which is suitable for a variety of crops. Large area of the lower portions of the alluvial[7] fans spreading out from the mountains towards the northern lowlands, are covered by loess[8] (in northern part of the region) on which mineral rich *serozem* soil has developed. This is one of the most extensive belts of loess in the world. In some places it reaches thickness of several hundred feet.[9] The loess stands in vertical cliff because of its loosely compacted porous nature and is the ideal soil for farming.

Water Resources

As Central Asia is one of the most dry regions of the earth,[10] the availability of water is most essential for irrigation. Without irrigation the

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[7] **Alluvial fans:** When a stream is supplied with more rock waste than it can carry, the excess material is spread along the channel bottom. Fans are built by young streams carrying heavy loads of coarse rock waste out from a mountain or upland region, where the stream flows out upon the gentle slop of the plain, the current velocity is greatly reduced, thus forcing the stream to deposit. For details, see Arther N. Strahler, Physical Geography, (New York and London: Johnwiley and Sons Inc., 1960), pp.356-57.

[8] **Loess:** In several part of the world the ground is underlain by deposits of wind-transported silt, which has settled out from dust storm over many thousands of years. The material thus formed is known as loess. For detail see Arther N. Strahler, op.cit., pp.440-43.

[9] P.E. Lydolph, op.cit, p.239.

[10] Ibid., p.238.

Central Asian people could only do dry farming in moister areas and grazing in the drier areas.

The river system of the region fall into three main groups: in extreme west of Kazakhstan, the Ural and Emba river flow from north to south into the Caspian Sea covering the Aktyubinsk and Uralsk oblasts. These rivers rise in Kazakhstan and flow across the Siberian plain, being of relatively little use to Kazakhstan itself and within the region a number of major rivers rise in the mountains to the east and flow either into the Aral Sea or disappear into the desert.

The perennial streams are limited primarily to those whose headwaters lie in the high mountains and are fed throughout the summer by the melting snows and glaciers. In the south the two outstanding streams of this nature are the Amu-Darya and the Syr-Darya, the two great rivers of Central Asia that flow into the Aral Sea. Many smaller streams also flow out of the southern mountains which are most important for irrigation. These are the Ili and Chu rivers in the east, the Zeravshan between the Syr-Darya and Amu-Darya, the Murgab and the Tedzhen in the Turkmenistan, and the Vakhsh in Tajikistan.

Besides the river system in Central Asia, there is a huge natural reservoir of water named Aral Sea. Aral Sea is the fourth largest lake in the world, with a surface area of almost 25,000 square miles and comparatively shallow depths of 30 to 60 feet throughout much of its extent. The two large

rivers of Central Asia, Amu Darya and Syr Darya feed Aral Sea throughout the year.

Agricultural Belt

Though most part of Central Asia is arid, some part of the region is most suited for agriculture. In the middle age the region witnessed several invasions and some external settlers settled in the territory was began agriculture in the region. Later the territory inhabited by Uzbeks, most of whom had settled in oases and engaged in agriculture. They raised cattle on Tien Shan mountain pastures, in the intermontane depressions and partly in the plains of the Chu and Talas basins. The western region was peopled by Turkmen tribes and some of them settled down and engaged in farming in small oases on the slopes of the Kopet-Dag.

However, to have an idea of Central Asia under the Soviets, Central Asian agricultural region can be divided and studied in the following way.

Kazakhstan

Kazakhstan can be described as the continuation of the steppe part of Altai and is suitable for dry farming. In the south the foothills called Semirechye, which are watered by several medium-size rivers originating in the mountains, are suitable for agriculture. Irrigated farming is alsc conducted on large scale on the banks of these rivers. In Kazakhstan agricultural lands lie along the Urals and between the towns of Urals and Guryev.

The urban agriculture zone in central Kazakhstan is important for the supply of fresh vegetables, fruits, milk and other products. In the West Siberian steppe and the desert parts of the Central Kazakhstan, lies the greater part of the famous virgin and follow lands whose cultivation in the latter half of the 1950s was an outstanding achievement of the Soviets to develop agriculture there.

Alma-Aty, which in Kazakhstan means father of apples,[11] gets its name from abundant apple orchards in its environs. The region is also known for its sugar belt fields, gardens, tobacco plantation and vineyards. Extreme western part of Kazakhstan is desert and semi-desert area having rigorous winters. So in this part only small herds can feed on the scanty pastures.

Kyrghyzstan and Tajikistan

These two Central Asian Republics are mountainous regions. Narrow strip along the northern slope of the Kirghiz range is fit for agriculture and it has extremely fertile loess soils. The region is famous for the production of cereals, sugar beets and fruits. Another important agricultural district in Kyrghyzstan is the area around the Issyk Kul depression which has cool climate suitable for growing cereals, potatoes and fruits. In some part of the Issyk Kul, cattle breeding is done in the nearby mountain pastures.

Southern region of Kyrghyzstan is an area of highly developed agriculture. Here rain-fed cereals are grown. Below there are cotton fields

[11] Ibid., p.243.

irrigated by mountain rivers. Although farming has become the principal occupation of most part of the Ferghana valley, there is also a continuation of cattle breeding tradition due to proximity of mountain pastures.

In the north of Tajikistan large areas are covered by cotton fields and orchards. The Ferghana part of present day Tajikistan is the old region of irrigation farming and trade. The long and hot summer in the territory adjoining Dushanbe has made it possible to cultivate valuable long-staple varieties of cotton that were not grown in the USSR before. After the establishment of Soviet power, agriculture developed in the southern part of Tajikistan which became famous for high quality cotton. Besides cotton, considerable improvement has been made in horticulture, viticulture and sericulture also in this area.

Uzbekistan

A considerable part of the country is covered with desert or very arid steppe. Agricultural activity is confined in areas where water is available Ferghana valley is the most fertile area made up of alluvial soil with access to mountain rivers. It is famous for cotton cultivation. Uzbekistan is known for its cotton supply to the world.

Turkmenistan

In Turkmenistan, the main agricultural activity is centered in the oases, the Murghab and Tedzhen oases situated in the lower reaches of

these rivers. These oases produce cotton, fruits, melons and grapes. The Khorezm oases are situated in the lower reaches of the Amu-Darya.

In Turkmenistan the cattle breeding is the principal means, because the desert vegetation is the best fodder for Karakul sheep.

HISTORICAL PERSPECTIVE

Before the Russian conquest, there existed three Khanates of Bukhara, in the basin of the Zeravshan river, Khiva on the lower Amu-Darya and Kokand on the Syr-Darya, Chu and Illi rivers. These Khanates were ruled by feudal Khans, whose dynasties were established by the end of the eighteenth century.

All these three Khanates were economically backward and feudal states. The main occupation of the people was cattle-breeding and horticulture. Very little cotton was produced and even that was of an inferior quality. Towns were the centres of handicraft, production and trade. Cotton and silk cloth produced by craftsmen in Bukhara, Kokand, Tashkent and Samarkand was sold in different countries in the east and also in the Russian Empire.

Land Tenure

Throughout the Khanates, land was the pre-eminent commodity and sign of wealth. The wealthy merchants sought to acquire as much of land as possible. The officials, soldiers and servants wanted their service to be

recognised through grant of land. The reward handed out by Amirs to individuals was primarily in the form of land grants. The pious men left their land to the religious organisations. Titles and rights to land were governed by customary law *(adat)*.[12]

Among the nomads, land tenure was determined by family organisation and by the conditions of their stock-raising economy. The nomad groups moved about as a unit and held grazing lands in common. The extent of a group's pastures depended on its ability to seize land to maintain its position against other groups. They shifted with variation in rain fall and with the rise and fall of tribal strength. The poor and the aged could not migrate with the groups. So that they used to grow a small quantity of grain on tilled plots or gathered hay on meadows.

The settled population usually resided in the irrigated oases of Turkestan and had a more complex system of land ownership. The principles of land utilization and ownership was based on the principles of *Shariat*.[13] According to Holdsworth the *Shariat* governed civil and criminal obligations and penalties, religious observance, family life and inheritance, while customary law was pre-eminent in land-holding and agricultural practices.[14] As the whole region was governed by *Shariat*, there was a theoretical absence of private ownership of land. The Amir or Khan being regarded as

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[12] Mary Holdsworth, Turkistan in the Nineteenth Century, (Oxford: St. Antony College, Soviet Affairs Study Group, 1959), pp.12-13.

[13] R.A. Pierce, op.cit., p.142.

[14] Mary Holdsworth, op.cit., p.14.

the deputy of the religious power, had supreme control over all lands. The land used by the people was considered a part of the state holdings, loaned out permanently. The land system of the Khanates could be categorised in several forms:

(1) **Personal land:** It was a land of public domain, comprising lands at the immediate disposal of the state. This type of land consisted of cultivated land, orchards, palace grounds; uncultivated or waste land and lands whose owners had died without leaving an heir.

(2) **Proprietary land:** It had a hereditary ownership by the proprietors settled on them. The land belonging to this category comprised several types such as tax free land specially given by head of the state, land acquired by the indigenous population at the time of the Arab conquest on condition of payment of a tax which often amounted to a seventh or sometimes half of the harvest.

(3) ***Amliak* land,** which was previously unirrigated and unoccupied land, it was reclaimed from the desert. These lands was allotted to those who irrigated and cultivated the same. The tax on this land was much larger than usual land tax, because the tax on land represented payment for irrigation water, while the tax on the *amliak* land represented payment for both water and land. The *amliak* land could not be transferred to another owner, or turned into a *wakf* or trust.

(4) ***Wakf* land:** *Wakf* lands being the property of Muslim institutions, were not subject to taxation.[15] It was the land given by private individuals or by the state authority i.e. Khans to the Muslim shrines, mosques etc. The income of the *wakf* land was devoted to religious work such as maintenance of a madarassa or mosque or for charity. In Central Asia there were four types of *wakfs*. Two of them were of normal type found in other Muslim countries and two of them derived their origin from local custom, and were peculiar to Central Asia.[16]

a) Pure *wakf*, which was free from all taxes and it was managed by the Amir or Khan.

b) Conditional *wakf*, in which *wakf* right was limited to a specified share of the profits gained from it, set by the state when it approved the conferring of the *wakf*.

c) *wakf* in which the property was not transferred to the institution, but remained in the hands of the founder of the *wakf* and after his death was transferred to his heirs. The aim of the establishment of this type of *wakf* was the guarantee of property, whereas according to the *Shariat* a person working in these lands had no right of inheritance.

d) Fictional *Wakf*: It was a *wakf* which was founded by landowners who wanted to safeguard themselves from confiscations and to avoid

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[15] G. Wheeler, op.cit., p.72.

[16] Ibid., p.46.

government taxes and obligations. For establishing this type of *wakf*, landowners had to go through an agreement with some religious educational institution, which for a certain sum agreed to be the holder of the *wakf*. But the actual owner of the *wakf*'s earnings happened to be the landowner only.

e) Gift lands: This type of land we mainly in Khiva. It was the reward handed over by the Khans to their servants for services and thus was free from all taxes. The proportion of this type of land was very high. Modern Soviet historians estimate that as much as half of the agricultural land belonged to the Khan and to the beneficiaries of his gifts.[17]

The Muslim clergy used to keep much of land under the category of *wakf* land especially under fictional *wakf* because state had no control over this type of lands and *wakf* holder had not to pay any taxes. The clergy had complete control over the *wakf* lands and their revenue as only a small portion of the revenue was paid to the State.[18]

Water Law

Land tenure in Central Asia was closely associated with the question of water rights. Because of the region's aridity, irrigation was of prime importance. The regulation of water rights and irrigation facilities was

[17] Marry Holdsworth, op.cit., p.23.

[18] G. Wheeler, op.cit, p.73.

defined by custom and the *Shariat*. The extension of canals through the land of various owners was regulated by the *Shariat* the right to water was related to the right to land. Whereas all unirrigated and uncultivated land was considered subject to the supreme authority of the government, any irrigated and cultivated section of land belonged to whoever had made the improvements upon it.

Irrigation projects needed tremendous expenditure in terms of men and money and could only be conducted by the sovereign or powerful individuals able to hire or to draft the necessary working force. There were specific personnel responsible for supervision of canal maintenance and the disposition of water. Land, water and animals were concentrated in the hands of feudal lords and kulaks. More than 65 percent of the total number of peasant households in Turkestan were landless peasant *(Batraks).*[19] The private land of the Khan and other feudals in Khiva comprised two-thirds of the total irrigated and fertile land; one seventh state and *wakf* land, and was the only one-tenth land under the ownership of peasants. In Bukhara, 65 percent of the total cultivable land was under the feudal whereas 24 percent was *wakf* land.[20]

[19] D. Kaushik, op.cit., p.67.

[20] Ibid., p.67.

The Native Tax System on Land and Water

The native system of land tenure and water rights formed the basis of a complex structure of taxes. As the economy was primarily agricultural, the greatest burden of tax lay upon land. Owners of proprietary land paid the tax, which was of two kinds: (a) The proportional tax on grain lands, determined annually by a sampling of the harvest. This type of tax happened to be as much as half of the harvest, paid in kind. (b) Fixed tax levied on lands of fixed dimensions for which the harvest could not be determined, as on gardens, orchards and meadows. Besides there was also the water tax. Water tax was called *mirban* tax levied for upkeep of the canals. Moreover a tax of one fortieth of the worth of all cattle also was levied.

Reforms in Tsarist Regime

After the Russian conquest of Central Asia, Tsarist regime established the Governorate General of Turkestan. Tsarist government declared all lands of the Central Asia as the crown property.[21] The Russians did not take any step to alter the existing land system and existing practices. But the Russian authorities declared all land occupied by buildings and plantation as hereditary private property, whereas the *wakf* land received special consideration. Privately owned land could be sold or disposed of as the owner wished. In case of disputes the native courts were instructed to be governed not by traditional ownership but by the right of whoever used the

[21] R.A. Pierce, op.cit., p.147.

land. R.A. Pierce who has done considerable research on Russian administration in Central Asia feels that the steps taken by Russians towards land reforms have not been clear. He writes: "It is unfortunate that Soviet historical literature has not yet provided any detailed description of this land reform, one of the most progressive steps taken by the colonial regime".[22]

During the Tsarist Russian regime the Russian immigrants such as peasants, army officers, government officials, merchants, adventurers entered Central Asia and settled there.

The Russian officials took place of the ousted officials of the Khans and for the Russian peasants, government issued a decree by which unoccupied lands adjacent to settled areas and lands occupied by the nomads were declared to be state property. This was specially stated in the statutes governing the steppe and Turkestan; the population inhabiting these areas was accorded only the right to use the land. Later the government declared much of the steppe lands as surplus, and allotted the same to Russian peasant settlers.

The settlement of Russian peasants in the Kazakh Steppe does not seem to have been planned by the Russian government before the subjugation of the steppe had been completed.[23] The settlement began first along the Ural river, then to the south of Orenburg and finally in

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[22] Ibid., p.148.

[23] Ibid., p.76.

Semirech'ye[24] and by 1881 about thirty thousand persons had been settled in Semirech'ye. Meanwhile, peasant colonisation of the eastern steppe *oblasts* of Akmolinsk and Semipalatinsk was proceeding. By 1911, the Russian settlers made up 40 percent of the population in the Ural'sk, Turgay, Akmolinsk and Semipalatinsk *oblast*, totaling of 1,544,000 persons. On the other hand, settlers only amounted to 407,000 or 6 percent of the total population. Of these, over 204,000 were in Semirech'ye and only 2,00,000 were in the remaining four *oblasts.*[25]

All the Russian settlers were not enjoying prosperous life. According to Wheeler the standard of living of the Russian peasant was not noticeably higher than that of the Central Asian, and in some cases a good deal lower. He also mentioned about the presence of Russian slaves in Khiva and to a smaller extent in the Bhukhara Khanate.[26]

Land Tax under Tsarist Regime

When the Russians assumed authority in Central Asia, they undertook extensive reforms in the field of taxation. Several original taxes were retained but in simplified form. The harvest tax continued to be levied on the native settled population, but only one-tenth of the harvest was collected instead of the larger amounts exacted under native feudal rule. The *tanap* tax (orchard

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[24] The oblast of Semirech'ye consisted of what are now the Alma-Aty oblast and the whole of the eastern half of Kirghizia.

[25] M.A. Tehokaiff, "Fifteen Years of Bolshevik Rule in Turkistan", Journal of the Royal Central Asian Society, vol.XX, no.III, July 1933, p.351.

[26] G. Wheeler, op.cit., p.50.

tax) continued to be levied. The following taxes were levied by Tsarist government in Central Asia:

(1) A *Kibitka* tax on the nomads (*Kibitka* was a nomad tent, but used for fiscal purposes in the sense of household).

(2) A land tax on the settled rural population.

(3) A tax from the Russian and non-native rural population.

In addition there were the taxes for local needs assessed on the same basis as the above, and settled rural population paid further taxes for, among other things, the support of the village administration and irrigation officials.

The *Kibitka* Tax

Before the Russians came to power in Central Asia, nomads had to pay taxes when they came under the away of one or other of the Khanates.[27] In place of these random and unequal exactions, the Russians now instituted a definite tax per *kibitka* (household). For the Kazakh population two rubles and seventy-five kopecks per *kibitka*[28] and for Syr-Dar'ya, Samarkand and Ferghana oblast the tax was four rubles per *kibitka*.[29] In case of those Kazakhs who had begun to settle and practice agriculture, they had to pay both the land and *kibitka* tax.[30] The tenure for payment of *kibitka* taxes was

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[27] R.A. Pierce, op.cit., p.149.

[28] Ibid., p.149.

[29] D.S.M. Williams, "Taxation in Tsarist Central Asia", Central Asian Review, vol.XVI, no.1, 1968, p.51.

[30] R.A. Pierce, op.cit., p.149.

different for different regions. In general it was annual but it was three yearly in Semirech'ye.[31] The number of *kibitka* and the total sum collected under this tax were calculated every three years. For the three year period 1908-10, the total number of *kibitka* in Syr-Darya, Samarkand and Ferghana was calculated as 215,285, and the *kibitka* tax as 861140 rubles.[32]

(2) The Land Tax on Settled Rural Population

This tax was related to the type of land: irrigated land and cultivated non-irrigated land. The tax on the irrigated land amounted to 10 percent of the average gross income fixed for a number of years on the basis of surveys and enquiries of the average harvest on the land. The body, responsible for these surveys and enquiries, was land-tax commission.

The Turkestan Ordinance of 1886 imposed tax on non-irrigated but cultivated land on the basis of the irrigated land, that is 10 percent of the harvest gathered in the tax year, while unworked land was not taxed at all. The basis of taxation for both cultivated non-irrigated and unworked land was changed in 1900. Now it was decided to impose tax of one ruble per *desyatine* of cultivated non-irrigated land and 20 kopecks for unworked lands.[33]

The settled population paid additional taxes for the support of the village administrative and irrigation officials on the same basis as the

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[31] D.S.M. William, op.cit., p.52.

[32] Ibid., p.53.

[33] Ibid., p.54.

nomads. Similarly, village assemblies were entitled to impose taxes of their own. For 1908 the sum paid in taxation by the settled native population of about 28,00,000 amounted to about 68,20,000 rubles,[34] at the rate of two ruble forty four kopecks.

(3) The Tax from Russian and Non-Native Rural Population

This tax system covered the (a) Russians, (b) Dungans, (c) Germans, (d) native town-dwellers who had settled on the nomad lands. These were exempted from any taxation before 1904. However, the Russian and German village population alongwith the lower rank of army (retired/reserved) had to pay taxes according to the new legislation of 1904. Furthermore, the Dungans and the native town dwellers were exempted from paying taxes.

The tax was fixed at 15 or 30 kopecks per *desyatin* of good land depending on the category of the population and the time of settlement.[35] The tax for local needs was a percentage of the state tax calculated on the basis of factors such as the type of soil and on the basis of harvest. In 1908 the state tax amounted to 81124 rubles from above the mentioned sources.[36]

As regards, the tax on *wakf* land, it was a difficult and complex issue. The land under *wakf* constituted much valuable property, large tracts of arable land and pastures with tax free status. The *wakf* land constituted

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[34] Ibid., p.55.

[35] Ibid., p.56.

[36] Ibid., p.56.

about 45 percent[37] of total cultivated land and all *wakfs* were almost tax free. Thus the government was deprived of a large part of her revenue so, to make up this loss, government imposed tax on rest of land in larger amount. In Bukhara, 65 percent of the total cultivable land was under the feudals and 24 percent was *wakf* land, so that the main burden of taxation fell on the peasant. Peasants had to pay the *kheradzh* (harvest) and *tanap* (orchard) taxes also. In Khiva, there were 25 different taxes on peasants, and in Bukhara there were 55 such taxes.[38] For the harvest or *Kheradzh*, there was a fixed tax of one-tenth of the gross yield. It caused difficulty to the peasants when crops failed.

The new system of land taxation introduced by the Russians was strongly criticised. There was wide-spread abuse and corruption both on the part of the native tax collectors and of Russian officials. Responding to the criticism, the Russians again reformed the tax structure. In the new system, the cost of tax collection was lowered giving considerable relief to the peasants. They reorganised the *wakf* and directed that the *wakf* income would be used for restoration work in some of the city's ancient monuments.

Agricultural Development under the Tsarist Rule

Though the pasture lands of Central Asia and the steppe region is fertile, it was impossible to cultivate the lands without proper irrigation

[37] Marry Holdsworth, op.cit., p.23.

[38] D. Kaushik, op.cit., p.67.

facilities. Long before the Russian conquest irrigation was practised in Central Asia on traditional lines. Under the Khans, the agricultural practices increased alongwith the rise in population. During that time the main occupation of the people was cattle breeding and horticulture. Towns were centres of handicrafts production and trade.

At the time of Russian conquest, Central Asian agriculture was done only on subsistence basis. Wheat, rice and other crops were the principal crops. Gardening played an important role. The region was famous for its melons, fruits and vegetables. There were orchards wherever land was cultivated, and besides domesticated fruit trees many fruit species also grew wildly. Alfalfa was grown for fodder. Very little cotton was produced in the region,[39] but the cotton and silk were the only agricultural products which were exported to the neighbouring countries and mainly to Russia. Pierce pointed out that silk culture was introduced in Turkistan in the Christian era and cultivation of cotton was brought from India by way of Persia in the ancient period.[40] Even in the first half of the nineteenth century, before the Russian conquest, cotton was grown in the region sufficiently but after the Russian conquest its cultivation increased. During 1860's Russia and the rest of the world experienced acute shortage of cotton as a result of the American Civil War. At that time America was the principal supplier of cotton. Shortage of cotton resulted in the rise in prices of cotton. In 1861 Turkestan cotton

[39] Ibid., p.30.

[40] R.A. Pierce, op.cit., p.126.

Year	Planted Area with Cotton (in *desyatines*)
1884	450
1885	1000
1886	12000
1887	14500
1887	68000
1902	194800
1910	328700
1916	650000

Source: For 1883 to 1888, R.A. Pierce, Russian Central Asia, 1867-1917, p.165 and 1902 to 1916 - M.A. Tchokaieff, Fifteen years of Russian rule in Turkestan, Journal of Royal Central Asiatic Society, vol.20, no.3, July 1933, p.356.

Such an increase in cotton production resulted in the increase in export of cotton to Russia.

Year	Export (in poods)
1901	6880000
1909	10771000
1911	13181000

Source: R.A. Pierce, The Modern History of Soviet Central Asia, (London: Weidenfeild and Nicolson, 1964), p.166.

were sold at four to five rubles per pood, but by 1864 its price had risen to between twenty and twenty three rubles. The rising prices greatly stimulated cotton cultivation throughout Turkestan. Within the short period of three years the cotton exports to Russia rose from 1,52,000 poods in 1861 to 7,04,000 poods in 1864.[41]

Though the production of cotton in Central Asia increased, the quality of cotton was very inferior and method of production was also traditional at the time of Russian conquest. Processing of cotton was done by hand only. Russian authorities tried to improve the quality of cotton and method of production, on the example of United States. In the early 1880's the more suitable American upland cotton variety was introduced and American machinery was installed for processing it. By the introduction of new variety of cotton, excellent results were attained and the planted area increased rapidly.

Other Crops

Although cotton became the dominant crop in the settled regions of Central Asia during the Tsarist Russian period, other crops retained considerable importance and in most cases underwent various changes in growth. Cereals grown in the region included wheat, rye, oats, barley, millet, sorghum and rice. Most of the grain could be grown on unirrigated land.

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[41] Ibid., p.164.

The Russian policy to increase the cotton cultivation in the region made it unprofitable for agriculturists to grow wheat. When prices of wheat began to rise in Central Asia due to expensive cultivation of cotton, Russian government introduced cheap freight rate on wheat shipment from European Russia.[42] As a result, the price of grain in Turkestan fell in successive years, causing more natives to turn to the raising of cotton.

Although rice pilau was the favourite dish of the people of Central Asia, production of rice was confined to marshy grounds, as it needed much water. But the production of rice was not enough to meet the needs of local population as the area of marshy ground was limited and malaria was prevalent in the rice-growing region. So the Russian authorities had to forbid the growing of rice within ten versts of town due to the prevalence of malaria in rice-growing region.[43]

During the 1860's the Chinese Muslim immigrants began growing rice in Semirechye oblast. Before their coming the inhabitants of the oblast used to import rice from Syr-Darya oblast and Kuldzha, but through their efforts Semirechye became an exporter of rice to other regions.[44] In the 1890's the Russians introduced the new variety of Chinese dry rice, which required less water than the traditional variety of Central Asian rice. It gave very good

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[42] Ibid., p.167.

[43] Ibid., p.171.

[44] Ibid.

results. And the people of Central Asia began to grow the new variety of rice. In 1912, rice was cultivated in 110,000 acres in Turkestan.[45].

Fruit production in Central Asia was very less though the climate of the region was suited for fruit and nut production. R.A. Pierce writes "the hot, virtually rainless summers of Semirechye oblast and the Syr Darya and Amu-Darya valleys are similar to those in the fruit-growing regions of Central California. Several kinds of fruits and nuts had been grown in Central Asia for many centuries, but it was for local consumption only. Export of fruits was not possible due to lack of transport facilities. The Russians improved the transport system and in 1895, the Trans-Caspian Railroad was completed. Later refrigerator van was also introduced for the transportation of fresh fruits. Thus fruit production increased and by 1914 bout 5,786 tons of fresh fruits were exported from Central Asia.

Though Central Asia was known to have sericulture from ancient times, its technique was poor, as hatching of silkworms was done by traditional method. Russians introduced several measures to improve this in 1871 and an experimental station for silk production was established in Tashkent. Measures were also taken to increase the production of cocoons and by 1914 Central Asia began to produce about 100,000 poods of dry cocoons per year.

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[45] Ibid.

The Russians introduced some new crops in Central Asia, besides developing traditional crops. The climate in Central Asia was ideal for growing grapes to produce wine. The experiment of introducing grape cultivation was successful and in 1908 about 65000 acres in Central Asia were planted with grapes of which 87 percent was controlled by Russians. Cultivation of sugar beet was also introduced by Russian in the region and in 1911 some 2064 *desyatines* were planted with sugar beet. Another Russian innovation in Central Asian agriculture was the production of honey and bees wax. Beekeeping in Central Asia probably entered with the Russian colonists from Siberia in the first half of nineteenth century. By 1910 there were over 8,00,000 hives in Central Asia. Thus, in early twentieth century the pattern of agricultural practices, as it evolved under tsarist Russian rule, showed marked preference to cotton, followed by grains, fruits and sericulture. Agriculture had become an important element in the Central Asian economy.

CHAPTER II

SOVIET POLICIES AND PRACTICES

SOVIET POLICIES AND PRACTICES

In October 1917, the Soviets came to power after the great Bolshevik revolution, defeating the Tsarist regime. The common peasants and workers in Central Asia supported the Bolsheviks in their cause to fight against the tyrannical forces of oppression represented by the feudal *'bais'* and landlords.

The people of Central Asia supported the Soviets in the hope that the Soviets would provide them with the ownership of land which was traditionally owned by the feudal landlords. Though being 96 percent illiterate, the common people of Central Asia understood well that their prosperity lay in the ownership of land as they were basically dependent on agricultural mode of production. After the Bolsheviks came to power, they introduced new reforms in the traditional agricultural system of Central Asia, particularly the abolition of landlordism, socialisation of agriculture, massive irrigation networks and mechanisation.

(I) Liquidation of Landlordism

Though the Central Asian people knew that their benefits lay in the ownership of land but their mindset was such that they were not prepared to fight for it. Since ages, the feudal landlords were considered as the owners of land and that the peasants could only work under the landlord or do share-cropping. In Central Asia the patriarchal system was so firmly established

that the idea of seizing a landlord's property simply did not occur to the peasants. In Turkestan, the land was already owned by tribes or family unions and the idea of confiscating this land and distributing it to individuals could create a negative impact of Soviet socialist policy among the local tribal leaders.

For the fulfilment of the real desire of the Central Asian peasantry and for establishing the socialized agriculture, Soviet authorities undermined the traditional system of agriculture and agrarian relationship. They pitted the peasants against landlordism and land owners. They launched a widespread propaganda campaign among the 'have-nots', articulating their grievances and dissatisfaction against the 'haves'.[1] The party cadres worked among the poor peasants and landless labourers to organise them in the peasant's union known as *'koshchi'*. In August 1921, the Central Committee of the Turkestan Communist Party commissioned 686 communists to explain the essence of *'koshchi'* to the working people.[2]

Certain important steps were taken in the very first months following the October revolution. In the second All-Russian Congress of Soviets, Lenin passed a decree on nationalism of land. The Turkestan Commissariat for land management issued a regulation prohibiting all future deals in land. Renting of land was allowed only in exceptional cases with the permission of the

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[1] G. Wheeler, The Modern History of Soviet Central Asia, (London: Weidenfeild and Nicolson, 1964), pp.134-35.

[2] M.S. Sansanwal, Political Leadership in Soviet Central Asia 1946-64 (New Delhi: Commonwealth Publisher, 1988), p.48.

local land committee for a period not exceeding one year and with the confirmation of the local Soviets. The Statute of the provisional government relating to the organisation of land committee was changed.[3] In December 1917 the *Sovnarkom* stopped the immigration administration from continuing with the distribution of lands to immigrants,[4] which put a check on the Russian immigrants getting land in Central Asia. After these important decrees were announced by the Soviet authorities, several big landed estates were nationalized. By a decree of the *Sovnarkom* issued on March 13, 1918 all irrigation canals and channels were transferred to the land commissariat.[5] These basic principles of the land policy of Soviet authorities in Central Asia were confirmed by the law passed by the *Tslk* and *Sovnarkom*. The first article of this law declared on November 17, 1920, that all land and water situated within the territory of the Turkestan Republic was the state property of the people.[6]

The Soviets passed the decree to prevent land distribution among the immigrants, in order to remove the existing hatred of the native Muslim population against Russian colonisers.[7] Soviets gave urgent attention to land

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[3] Turkestanskiya Vedomosti, no.190, 9 December 1917. Cited in D. Kaushik, Central Asia in Modern Times, (Moscow: Progress Publishers, 1970), p.172.

[4] Ibid., p.172.

[5] Ibid.

[6] Ibid.

[7] M.A. Tchokaiff has written in Journal of the Royal Central Asian Society, vol.XX, no.III, July 1933, pp.351, that the emigration of colonization policy of the Russian government was to distribute the best lands to Russian peasants, thus forcing the population of the steppes to revert to a nomadic life or else settle on lands unfit for cultivation.

reforms in the Semirechye where the native Kirghizs had suffered as a result of the immigration of Russian settlers and the eviction of Kirghiz nomads from their lands. The Soviet government could not pursue the land reforms in Semirechye due to socio-economic conditions and more due to the fact that the Soviets and party organs in the Semirechye were also under effect of Kulak elements.[8] It further developed the hatred of natives against the Russians, which was to be expressed during the Basmachi Movement.

Taking due note of the existing void between the people of Central Asia and the Russians, Lenin in 1920 advised the Russians to abandon their privileged position. He said - "In one way or another by one's attitude or by concession, it is necessary to compensate the non-Russians for the lack of trust, for the suspicions and the insults to which the government of the nation subjected them in the past".[9] By a decree of 4th March 1920 issued at the 9th Regional Congress of Soviets, Lenin ordered the Russian settlers to return their land to the native peasants.[10] By May 1921, about 687,841 acres of such land were said to have been redistributed to 13,000 native households, mainly in Semirechye.[11]

It is a fact that the first stage of agrarian reforms was done in the main areas of Russian colonization in Turkestan, namely, the former Semirechye

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[8] D. Kaushik, Central Asia in Modern Times, (Moscow: Progress Publishers, 1970), p.173.

[9] Lenin C.W., vol.36, p.308. Cited in M.S. Sansanwal, op.cit., p.48.

[10] D. Kaushik, Central Asia in Modern Times, op.cit., p.173.

[11] G. Wheeler, The Modern History of Soviet Central Asia, op.cit., p.135.

and Syr-Darya oblasts. The Soviet reforms left a good impressions on the native people of Central Asia, laying the ground for abolition of national inequalities. Finally the Soviets were able to work up the peasantry against the landlords. Why the Soviets wanted the peasants against landlords. As Alexander Parks states - "The Bolsheviks were not aiming merely to put an end to historically derived inequalities in the countryside; they sought to destroy the landlords as a political, economic and social force in the village.[12]

The second stage of the agrarian reforms in the uncolonized area of the Central Asia, began in 1925. The earlier reforms were very slow and could not abolish the mediaeval forms of land ownership. The introduction of NEP in Turkestan led to the growth of agricultural farms of the *bais* and the middle peasantry. The Central Asian system of share-cropping (*Chairiker*) continued to exist with all its scourge of exploitation. All over Turkestan, the major chunk of land was still concentrated in the hands of few *bais*. A large mass of peasants had either no land of their own or had very few.

In March 1925, the Central Asian Bureau of the Central Committee presented a detailed report on the socio-economic condition of Central Asia specially on the situation of land holdings. Holdings up to two *desyatins* numbered 71.8 percent in Uzbekistan. In Samarkand, Tashkent and Ferghana *oblasts* peasants having land holdings from 0.1 to 3 *desyatins* numbered 70.7 percent. The number of peasants with no land holdings was reported to be

[12] G. Wheeler, op.cit., pp.135-36.

largest in Ferghana area.[13] Therefore, the Bureau decided to proceed ahead with the reforms. But it was felt necessary to do some preparatory work. Therefore, party land-water commissions were set up in different *oblasts* of the region. On 25th of June 1925, a central party land-water commission in Uzbekistan was set up.

The organisation of KOSCHI (Peasant's Union) of the native peasants, which was propagating the productive need for land reforms and land distribution, proved to be an asset to the party in its preparatory and propaganda work. The membership of the KOSHCHI increased manifold. In Uzbekistan, membership of the KOSCHI had grown to 155,956. The first Congress of the KOSCHI of the Republic of Uzbekistan was held on 25 June 1925.[14] At the same time a committee was set up to update data related to the agrarian situation. The Politbureau of the Central Committee created a Special Commission to study the suggestion of the Central Asian Bureau and to launch the extensive programme of agrarian reforms in Central Asia. It was also decided that these reforms should aim at eliminating the agricultural holdings of big land owners, traders and of the former officials of the Tsarist regime.

The confiscated land was required to be distributed in the first place, among share-croppers and other categories of agricultural labourers and next

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[13] R.R. Sharma, Marxist Model of Social Change: Soviet Central Asia 1917-1940, (New Delhi: Macmillan Company of India Ltd., 1979), pp.112-113.

[14] Ibid., p.115.

to those agricultural households, who had either no land or very little land. The second Congress of the Uzbekistan Communist Party took place on 22 November 1925, which formulated the slogan of revolutionary reorganisation of agrarian relationship, and the total eradication of feudal property. It was also decided to ensure that the poor peasants were also provided with adequate agricultural implements and live stock.

On 2 December 1925, the Central Executive Committee of Uzbekistan, issued the decree on land-water reforms. A similar decree was issued on 24 December 1925 in the Soviet Republic of Turkmenia. To ensure the success of the land reforms, a decree was issued simultaneously proclaiming the nationalisation of land and water resources. All the nationalised agricultural land which was meant to be redistributed, was accumulated in the 'state land fund'. Besides, the nationalised land of big land holders, the 'state land fund' also acquired the land belonging to the Commissariat of agriculture and the *wakf* lands. In the oblast of Samarkand, Ferghana and Tashkent, the land belonging to 15,603 households was confiscated, as detailed below:

Belonging to big land workers	-	594 households
Belonging to Traders	-	1,001 households
Belonging to those who were not engaged in self cultivation	-	13,603 households

The total confiscated land was estimated to be 3,260,877 *desyatines*.

The land realised by the state land fund from different sources:

From Ferghana	-	236,586 des.
From Wakf land	-	555,685 des.

Hence the total land realised by the State Land Fund was claimed to be 21,855,641 *desyatines.*[15]

On the distribution side, it was estimated that in the three *oblasts* of Uzbekistan, land was distributed among 63,360 agricultural households. Besides, 15,418 heads of livestock were distributed, out of which 3,432 head of livestock belonged to confiscated sources only. Those peasants who could not receive livestock got 120 rubles per head of cattle. Similar efforts were directed towards the distribution of agricultural implements. The peasant also received grants of loan for buying agricultural seeds. The success of land reform in the three regions of Uzbekistan prompted the Bolshevik leadership to go ahead with similar work in other parts of the republic.

(II) Socialisation of Agriculture

The Soviets not only aimed at the liquidation of landlordism and feudalism and redistribution of the confiscated land, but the ultimate goal was to establish the socialistic pattern of land and agriculture in the whole of USSR including Central Asia. In Central Asia the Soviets set the task of transforming a technically backward, small and partially patriarchal and natural peasant economy into a large scale mechanised collective socialist

[15] R.R. Sharma, op.cit., p.89.

economy. The process of socialist transformation in Central Asia was completed in following main stages;

1) Preparations for transition to socialist path.

2) Mass collectivisation of agriculture

For the preparation for transition to socialistic path, Soviets introduced co-operative farming envisaging that it would lay the ground for collectivisation. As to why the Soviets wanted the co-operative farming and finally collectivisation of agriculture, is answered by Lenin stating that "small farms cannot escape poverty. Large mechanised farms with high productivity alone could radically alter the agricultural scene. And for raising productivity it was necessary to move on to the collective economy from this economy of scattered small holdings".[16]

Lenin's remarks were very much true of Central Asia. Earlier reforms introduced in the region did not drastically change the situation, though the agricultural output increased at a slow rate and there was little improvement in peasant's living standard.

In the path of establishment of the socialised agriculture, the introductory steps were taken in 1918-19 in Turkestan when about 400 agricultural "communes" and artels[17] - were formed with the association of

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[16] D. Kaushik, Socialism in Central Asia, op.cit., p.127.

[17] Communes and artels were type of collective farming, under communes all the factors of production were collectivised and peasants used to live together while in artels peasants lived separately but work together in their collective farms.

forty thousand peasants. They had an area of 35,000 *desyatines* of land.[18] However, these communes were formed only to obtain self-sufficiency in food for a large mass of village *'batraks'* (landless labourers) and the poor in early difficult days of world war. At that time the communes had no economic and technical base and there was no compulsion to joint these communes because it was very much voluntary. The individual peasant economy was not suppressed and even the communes were broken-up when the need for food supply was fulfilled. But this kind of agriculture system gave a very good impression for collectivisation. Moreover these communes, some state farms (*Sovkhozes*) were also organised in Turkestan with a total area of 28,500 *desyatines* of land.[19] These farms also faced great difficulties in the beginning because there was acute shortage of cattle, hence land had to be given to the peasants on a share-cropping basis. Now the share was more fair than the old type of share-crop farming.[20] Such type of agriculture occurred only in war communism. The co-operative agriculture was actually introduced in NEP (New Economic Policy) period. Explaining its significance, Lenin pointed out that "the co-operative as a small island in capitalist society is a little shop. The co-operative, if it embraces the whole of society, in which the land is socialised and the factories nationalised, is socialism".[21] Lenin,

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[18] R.R. Sharma, op.cit., p.83.

[19] Ibid.

[20] D. Kaushik, Central Asia in Modern Times, op.cit., p.172-73.

[21] Lenin C.W., vol.33, p.472. Cited in R.R. Sharma, Marxist Model of Social Change, p.84.

thus put stress not only on the social character of the co-operative movement, but also its strength as an institution of social change and for the improvement of productivity in agriculture and finally to switch over to the collective form of agriculture.

But the small peasants of Turkestan were not able to understand the benefit of collectivisation. So they were not willing to pursue themselves in the collective farm. Lenin advised the party workers to keep extreme patience in dealing with the small peasantry. He admitted that it was not possible to transform a small holding economy into a large one at once.[22] Addressing the eighth Party Congress, Lenin warned against the use of force to achieve this aim. In the villages there were no such capitalist as in the town. So it was important to win over the peasantry and try to pursue them to the collective and not through the method of coercion. Lenin preferred the means of gradual co-operation of small peasants.

In the light of Lenin's vision, it was decided to strengthen the work of cotton co-operative society of various types in the first conference of cotton grower in 1921. Following this, a decree on agricultural co-operatives was issued by the Soviet People's Commissar of Turkestan on 16 August 1921, which sought to organise agricultural co-operative of the cotton growers. Besides this, another form of co-operative emerged in Central Asia such as co-operative for credit and the organisation of agricultural societies which

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[22] Lenin C.W., vol.28, p.319. Cited in D. Kaushik, Central Asia in Modern Times, p.234.

were authorised to distribute seeds etc. But the co-operatives in Turkestan were in trouble due to lack of administrative knowledge and experience. By the end of 1922, the representative of the all-Russian Agricultural Society *(selsoyus)* arrived in Turkestan and established close contacts with the co-operatives societies of Turkestan providing the letter necessary expertise and help.

The seventh Congress of the Turkestan Communist Party which was held in March 1923, decided to establish a firm and close link between co-operative and peasant organisation KOSCHI. The Congress also stressed the need to develop small scale co-operative credit societies so as to institutionalise the easy availability of credit to the poor peasants. So, the Turkestan government took the policy decision on the matter, directing the State Bank to actively finance the co-operatives. It was estimated that 42 to 52 million rubles were needed for financing credit to the co-operatives. Hence, the State Bank was instructed to keep 25 percent of its circulation aside.

A conference of co-operative societies held in Moscow in February 1923, endorsed the suggestion to set up a branch of the All Union Co-operative Bank in Turkestan. It made it possible to set up an agricultural bank in Turkestan, which become operational in March 1923, having a basic fixed capital of 3 million rubles.[23] The Agricultural Bank facilitated the

[23] Ibid., p.86.

peasantry through agricultural co-operative societies in the form of agricultural instruments, cattle and various other relief measures. But the inadequateness of financial resources of the agricultural credit bank gave only marginal help to peasants. Hence the traditional sources of credit remained actively alive.

To overcome these problems the twelfth Congress of the Soviets of Turkestan, which was held in January 1924, decided to increase the volume of the Agricultural Bank's capital. It also decided to grant the long term loan for poor peasants and provide the guidance in matters of agricultural production. These decisions were approved by the Central Asian Economic Council a few months later. The Council also defined the area for which the credits were to be given providing maximum credit to the cotton producing area, as is evident from the following:

To cotton producing areas	:	270 societies
Rice	:	56 societies
Grape	:	35 societies
Grain	:	20 societies

Source: Narodnoc Khoziaistvo Srednei Azii, No.5, Tashkent, 1924, pp.79-80. Cited in R.R. Sharma, Marxist Model of Social Change, pp.86.

In July 1924, the total credit given by all banks together amounted to 3,818,795 rubles. Of this, the largest contribution were made by the

Agricultural Bank (1,351,000 rubles), and the Sredazkom Bank (1,989,199 rubles).

These Soviet efforts left a good impression on the native poor peasants and the simple co-operatives soon became popular, thus providing a basis for the collectivisation of agriculture in Central Asia. Although the collective farm was introduced in 1920's, mass collectivisation was launched in 1929 and by the end of 1940 almost entire households of Central Asia came under collective farming.

Collectivisation

The need for collective and state farming in Central Asia was felt by the Soviets, as they thought, these forms of farming to be the best way to socialize the agriculture. Lenin found that millions of poor peasant households, lacking horses, farm implements and seeds, would not be able to use the land allotted to them effectively. He pointed out that it was necessary to set up big model farms out of confiscated lands in order to increase the agricultural products.[24] Lenin's vision of the large scale model farms was implemented in the form of collective farms (Kolkhozes).

The mass drive for collectivisation in Central Asia as well as in the whole of USSR was started by Stalin towards the end of 1929. He was eager to bring all peasants under the collectivisation programme believing that it would provide raw materials for rapid industrialisation and provide sufficient

[24] Berkhin I., Soviet Economic policy: Early Years, (Moscow: Novosti Press, 1970), p.8.

food for industrial workers. Stalin stated at the 15th party congress - "The way out is to turn the small and scattered peasant farm into large united farms based on the common cultivation of soil, to introduce collective cultivation of the soil on the basis of the new and higher technique. The way out is to unite the small and dwarf peasant farms gradually and surely, not by pressure but by example and persuation, into large farms based on common co-operative cultivation of the soil, with the use of agricultural machine and tractors and scientific methods of intensive agriculture".[25]

During the process of collectivisation, it was strongly felt by the Soviet leadership that the large agricultural farms lacked agricultural implements which adversely affected agricultural production. Hence, it was decided to establish Machine Tractors Station (MTS) with the hundred percent funding by the government. MTS started providing technical assistance to collective farms and state farms for which farmers had to pay a certain amount in kind. The number of MTS increased after the war period. There were 943 MTS in Central Asia at the end of 1955 as compared to 689 in 1940.[26]

Stalin laid stress on amalgamation of collective farms to make them more productive and efficient, as the small size of collective farms made mechanisation of agriculture inefficient.

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[25] M. Dobb, Soviet Economic Development since 1917 (London: Routledge and Kegan Paul, 1948), p.222.

[26] Calculated from Central Statistical Board of the USSR, National Economy of the USSR, Foreign Languages Publishing House, Moscow, 1957, p.126.

Like collectivisation, policy of amalgamation was implemented so quickly that it produced substantial chaos in the countryside.[27] By October 1950, five months after the policy was announced 46.7 percent of all collective farm were amalgamated in whole of USSR.[28] The amalgamation campaign was accompanied by a resolution reducing the size of collective farm worker's private plot. Besides, heavy taxes were imposed on such private plots. These plots were not the exclusive property of the peasant but were subject to taxes both in money and payment in kind. Thus if a peasant family had chickens, it had to pay a certain number of eggs to the state as a tax; if it had a cow or pigs, it had to pay a tax in the form of milk and meat; if it had a garden or an orchard, it had to pay a tax in vegetable or in fruits.[30] Fines and criminal charges were imposed for non-payment of the taxes. But since the taxes were assessed not on the plot itself but on what was produced, the peasants not only stopped producing but destroyed what they had. first they chopped down their orchard, in order to avoid paying out money of fruits. Then they slaughtered their pigs and cows, and killed off their chickens. Potatoes became the principal crop on the households plots because the quota for potatoes was a reasonable one.[31]

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[27] Cynthia S. Kaplan, The Party and Agricultural Crisis Management in the USSR, (Ithaca and London: Cornell University Press, 1987), p.48.

[28] Ibid.

[30] Medvedev R.A. and Medvedev Z.A., Khrushchev: The Years in Powers (New York: Columbia University Press, 1976), p.27.

[31] Ibid., p.30.

This policy undoubtedly created disaffection among peasants, as most collective farmers fed their family by raising food on their private plots and selling the surplus.

The low payment on collective farms was only because of the low procurement price and high quota delivery. The procurement prices were kept low envisaging that farmers would do hard work for residuals for their own, but the peasants were left with practically nothing from the harvest on collective farm. They were forced to work for a meager income from the collective form. In 1952 the procurement price for grain was only about 9 rubles per ton, several times less than the actual cost of production cost.[32]

Khurshev's Policy

After becoming the CPSU Secretary, Khruschev reversed Stalin's policy and proposed a sharp reduction of the taxes on private household plots. At that time there was acute shortage of livestock in the whole USSR as livestock holdings in 1953 were still below the 1928 level.[33] Private household plots were good producer of livestock. The taxation policy of Stalin had left private household plots doing livestock rearing and even cultivation, no more profitable. Khrushchev introduced the abolition of taxes in kinds and replaced it monetary taxes based on the individual households as a whole in proportion to the number of people in family. In addition the government

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[32] Zhores A. Medvedev, Soviet Agriculture, (New York: W.W. Norton & Company), 1987, p.152.

[33] Stefan Hedlund, Crisis in Soviet Agriculture, (New York: Croom Helm, St. Martins Press, 1984), p.69.

would purchase from the peasants any surplus at fairly high prices. This plan was enacted into law by the Supreme Soviet in 1953, which immediately brought relief to the peasants.

In September 1953 at a special plenum on agriculture held by the Central Committee, Khrushchev proposed, and the plenum agreed, that taxes on private plots be reduced still further and special benefits be provided for those peasant families who did not have a cow or other livestock for their own use.[34] Taxes on private plots were reduced again and the tax on cow or pigs was eliminated entirely. These relief measures resulted in rise of livestock in the USSR. In 1953 almost a quarter of the 20 million peasant families did not have a cow; in 1959 virtually all peasant families had a cow.[35] At the same time when the tax on private plot were being reduced, the procurement prices were increased for products supplied by collective farms over and above their quotas.

Grains, meat and milk registered a steady increase in prices. By 1962 grain prices, had risen more than eight time over the 1952 level. The procurement prices for meat and milk increased by more than 15 and 4 times respectively over the same period. However, there was no significant change in the price of cotton. In 1964, the procurement prices of cotton were increased by 15 percent as compared to previous year's price. Such increase in prices helped the collective farms to have some money residual for

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[34] Medvedev Z.A. and Medvedev R.A., op.cit., p.34.

[35] Ibid., p.35.

collective members. Before 1953, collective farms used to make profit by selling their little surplus after fulfilling the procurement quotas.[36]

√ Khrushchev and his Virgin Land Programme

When Khrushchev assumed power, the whole of USSR was coping with grain crisis. There was a constant increase in population which had grown by 30 million. Urban population had increased by more than 300 percent. While there was deficiency of grains. So Khrushchev wanted to expand the sown area with grain crops. He was looking towards virgin lands of northern Kazakhstan, eastern Siberia and the Volga region. On 22 January 1954 Khrushchev published a memorandum to the Central Committee, "way of solving the grain problem", arguing that the only way to remedy the acute shortage of marketable grain was by urgently increasing the area of sown land by exploiting at least 13 million hectares of virgin land in Kazakhstan, eastern Siberia and the Volga basin.[37]

Khrushchev's virgin land programme in Kazakhstan faced initial resistance from regional party organisation fearing Russification of large part of the Republic. A plenum of the Kazakhstan Communist Party Central Committee met in October 1953 and approved a plan that diverged from the line adopted by the Central Committee of CPSU.[38] As a punitive action, Kazakhstan Community Party's First Secretary Zh. Shayakhmetov was

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[36] Zhores A. Medvedev, Soviet Agriculture, 1987, pp.164-65, op.cit.

[37] Ibid., p.170.

[38] Ibid.

replaced by Ponomarenko and Afonov, the second Secretary of the Kazakh Central Committee was replaced by Brezhnev[39] who later first Secretary of Central Committee after Khrushchev.

The programme began in the spring 1954 of and by summer 3,00,000 young communist volunteers were sent to virgin land area.[40] The programme also got full support of MTS workers. After making virgin lands suitable for cultivation, hundreds of new state farms were established. Some of them were allotted tens of thousands of hectares of land at once.[41] It was estimated by Alec Nove that between 1953 and 1956 the area of cultivated land increased by 35.9 million hectares, an area equivalent to the total cultivated land of Canada,[42] of which 19.9 million hectares were in Kazakhstan only.

In 1954 the virgin lands could not be ploughed and in 1955 crops were ruined by bad weather, but in 1956 weather favoured the agriculture and unprecedented harvest of grain attained. In 1956, Kazakhstan became the second largest wheat producing Republic in USSR and received a high government award - the Order of Lenin - for its agricultural achievements.[43]

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[39] Ibid.

[40] R.A. Medvedev and Z.A. Medvedev, Khrushchev: The Years in Power, op.cit., p.59.

[41] Ibid.

[42] Dev Murarka, The Soviet Union, (London: Thomas and Hudson, 1971), p.101.

[43] P. Alampiev, Soviet Kazakhstan, (Moscow: Foreign Language Publishing, 1958), p.49.

Harvesting of Grain in Virgin Land

(Ten Million Ton)

Total Grain	1953	1954	1955	1956	1957	1958	1959	1960	1961
Harvest in USSR	82.5	85.6	106.8	127.6	105.0	141.2	125.9	134.3	137.3
Harvested in Virgin Lands	27.1	37.6	28.0	63.6	38.5	58.8	55.3	59.1	n.a.
Harvest in Kazakhstan	5.4	7.7	4.8	23.8	10.5	22.0	19.1	18.8	14.8

Source: Alec Nove, Soviet Agriculture Marks time, in Harry G. Shaffer, The Soviet Economy: A Collection of Western and Soviet Views, (London: Methuen & Co. Ltd., 1964), p.158.

Abolition of MTS

Abolition of Machine Tractors Station was another revolutionary policy of Khrushchev. MTS had developed alongwith the collective farms supplying agricultural machinery on rent. In the beginning there were small collective and state farms for which MTS efficiently supplied mechanical assistance. But after the amalgamation of collective farms and virgin lands campaign, large collective farms and state farms came into existence for which MTS failed to cope with their demand for agricultural equipments. MTS were also suffering from financial crisis.[44] They did not have enough funds to increase their machines and many machines were lying idle for wants of repairs.

After the abolition of MTS, collective farms were allowed to purchase their own agricultural equipments. The government even forced the

[44] For detail why MTS were suffering from financial crisis, see Zhores A. Medvedev, op.cit., pp.117-18.

collective farms to buy MTS equipments,[45] offering 20 percent allowance to the extremely poor farms which could not afford to purchase.

Brezhnev's Policy

1963 was Khrushchev's last year of his tenure. His popularity had been declining steadily since 1959, reaching the lowest ebb in 1963 when a disaster in agriculture led to food shortage. Harvest in virgin land was at its lowest since 1955. The continued single-crop cultivation caused heavy infestation of weeds. There was shortage of chemical fertilizers in the USSR at that time because factories were not producing much fertilizers. Khrushchev's decision to increase production of chemical fertilizers and pesticides in 1953, had failed to achieve the desired result.

Brezhnev came to power after Khrushchev resigned in 1964. He laid stress on making the collective farms and state farms technical efficient. In the special plenum of agriculture held in March 1965, Brezhnev announced reforms in agriculture. He also continued to increase procurement prices which were introduced by Khrushchev in 1953-55 and 50 percent bonus for above-quota delivery was reintroduced. Private plots were restored to their former size and all restrictions on private ownership of livestock were lifted.[46] Farms were given more freedom to decide what crops to grow.

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[45] Ibid., p.178.

[46] Stefan Hedlund, Crisis in Soviet Agriculture, op.cit., p.83.

Now collective farm worker qualified for pensions at the age of 55 for women and 60 for men. In July 1966, guaranteed minimum pay was introduced, to replace the old system of residual claim. Actually Brezhnev did not alter the existing system of agriculture but he adopted the policy of intensive development of agriculture.

The policy adopted by Soviets for agriculture in Central Asia was radical at one time and moderate on the other. Stalin was very much eager to get all households under collective farming for which he even applied a certain level of coersion. On the other hand Khrushchev was aware of the shortcomings of Stalin's policy which caused problems to the peasantry, and acted accordingly. Latter Brezhnev emphasizes scientific method of agriculture to improve productivity.

CHAPTER III

COLLECTIVISATION AND ITS IMPACT

COLLECTIVISATION AND ITS IMPACT

After the October revolution land in Central Asia became state property. The Soviet leaders took resolute steps to transform small scale agriculture into a collective mode of agriculture using big machines. G.D. Sane[1] has listed some pre-requisites, being conducive for mass collectivisation:

(1) There must be a strong government having the required will and determination to help in every way the transformation of small scale individual farming into large scale collective farming.

(2) The individual small peasant with his proverbial attachment to land must see and feel that large scale farming will free him from poverty and from subsistence farming.

(3) Required fund should be available for investment.

(4) Trained personnel, such as chairman, team leader, agronomists, experts in land exploitation, economists, accountants, required for running large farm, is not very scarce.

(5) The industrial base of the country is such as would supply tractors and other agricultural machinery in the required quantities.

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[1] G.D. Sane, Soviet Agriculture: Trials and Triumphs (Bombay: Popular Prakashan, 1976), p.75.

All these pre-requisites were not available in Central Asia immediately after the Revolution. With its complex socio-economic and cultural structure, Soviets pursued collectivisation campaign in Central Asia in stages.

The *Kolkhoze* was introduced in Central Asia simultaneously in the period of land reforms, and by the end of 1920, the number of *Kolkhozes* in three main oblasts of Turkestan exceeded thirty, as per details below:-

Samarkand oblast	-	12
Syr Darya oblast	-	18
Farghana oblast	-	Not well established

It was reported that by the end of 1920, the total number of collective farms of various types (including communes and artels) was 159, covering an approximate area of 16,384 *desyatins*. And the number of members of various communes and artels was reported to be 6,343.[2] Towards, the end of 1918, the Turkestan government received 13 million rubles from the RSFSR to develop the agricultural economy on the socialist line. This fund was invested in creating State farms (*Sovkhozes*). It was observed that the *Sovkhozes* were suitable for socialist agriculture in Central Asia. As the Third Congress of the Communist Party of Turkestan declared. "The path to socialism passes through socialisation of land, co-operatives, working artels and agricultural communes to Soviet form of economy... transition from

[2] Ibid., p.101.

capitalism to communism is not socialization, not agricultural communes, but Soviet form of economy".[3] First *Sovkhoz* in Turkestan came to be organised on the nationalised orchards and gardens. The total number of these *Sovkhozes* by the end of 1920 was reported to be seventy.

No. of *Kolkhozes* and *Sovkhoz* in Central Asia (1920)

	Kolkoz		Sovkhoz		
Oblast	**Number**	**Area in des.**	**Numbers**	**Area**	**Total Area**
Syr-Daria	32	1211	37	6353	7576
Samarkand	20	4324	12	1557	5881
Turkmen	19	1811	7	6800	8611
Fergana	188	9038	14	3138	12176
Total	**259**	**16384**	**70**	**17860**	**34244**

Thus the number and area of *Koklhoz*,was less as compared to the vast agricultural area in Central Asia. This was because the Soviets wanted to do it by persuation, rather then by coercion. Lenin was not in favour of sudden collectivization of agriculture, as it was too difficult to break away from the age old attachment of the farmers to their individuals lands. Lenin observed, "It would be the gravest mistake to think that such a gigantic transformation in the life of people can be made at a single stroke. That can not be done, it requires the greatest labour effort, it requires concentration, determination and energy on the part of each peasant and workers... it is not

[3] Trudy III, S'ezda K.P.T., Tashkent, 1919, pp.152-54 cited in R.R. Sharma, op.cit., p.102.

a thing that can be done by any sort of decree, but it is a thing that must be done".[4]

The drive for collectivisation of agriculture did not come into existence only by the decree of Party Congress but it was also supported by the party cadres. At the time of mass collectivisation campaign 25,000 workers with sufficient technical knowledge and organisational political experience were directed to villagers to help the peasants in organising collective farms.[5] Twenty-six brigades of 458 skilled workers cam from Russia to Uzbekistan alone.[6] The workers of Leningrad, Moscow and Ivanovo supervised the progress of work. They raised funds to help the newly-organised collective farms with agricultural machines, etc.

Although the Central Committee of the Union Communist Party had not set any concrete time limit for collectivisation in the national regions, the commission of the Politbureau of the Central Committee had suggested that the work of collectivisation in these areas should be concluded within three to four years, i.e. by the end of the first five year plan.[7] In the Central Asian republics the slogan "catch up and overtake the advanced regions of the country in the rate of collectivisation" was officially proclaimed at the end of

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[4] Lenin, C.W., vol.24, pp.504-05. Cited in Berkhin I., Soviet Economic Policy: Early Years, (Moscow: Novosti Press, 1970), p.10.

[5] "The Collectivisation Campaign in Uzbekistan", Central Asian Review, vol.XII, no.1, p.45.

[6] D. Kaushik, Socialism in Central Asia, op.cit., p.129.

[7] D. Kaushik, Central Asia in Modern Times, op.cit., p.237.

1929.[8] By 1 January 1930 the percentage of collective holdings in Uzbekistan had risen to 10 percent, but this was only half the average for the country. As the pressure increased, the Uzbek Central Commitee declared the Fergana valley a valley of complete collectivisation and on 11 February 1930, 17 *rayons* were put in the same category.[9] By the end of 1930 about 42 percent of peasant families were taken under collectivisation.[10]

During this process of collectivisation, several mistakes were committed. At several places peasants were forced to join the *Kolkhoz*. In the Bukhara region peasants in many villages were threatened with punitive measures if they declined to joint the *Kolkhoz*. Peasants at several other places were threatened with stoppage of water and other supplies and thus made to accept the *Kolkhoz*.[11] As a result *Bais* and *Kulaks* organised a strong agitation, opposing the collectivisation programme, arousing the senitments of peasants.

Despite such resistance, poor and middle peasants were forced to turn their lands, animals and implements to *Kolkhozes*. Stalin published his famous article "Dizzy with Success" on 2 March 1930 in which he called upon local officials to put a stop to distortion in the collectivization campaign. Central Committee resolution passed a resolution on 15th March 1930,[12]

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[8] "The Collectivisation Campaign in Uzbekistan", op.cit., p.45.

[9] Ibid., 1964, p.45.

[10] Kaushik, Socialism in Central Asia, op.cit., p.130.

[11] Ibid., p.131.

[12] "The Collectivisation Campaign in Uzbekistan", op.cit., 1964, p.46.

asking the party representatives to go round the region to explain the voluntary character of *Kolkhoz*. However, the government took measures to strengthen the *Kolkhozes*. By a decree of 2nd April 1930, peasants were freed from state taxes for two years. They were also given other concessions like free building materials, and state paid all the expenses connected with the land reorganisation.[13] Hence, the number of peasants in collectives rose slowly reaching 34.5 percent in Uzbekistan by 1 October 1930. Whereas in September 1929 there was an average of 15-20 household to a *Kolkhoz*, by the summer of 1930 the average had risen to 63.[14] And finally almost all households came under the collective farm by the end of 1940.

Percentage of Rural Households in Collective Agriculture

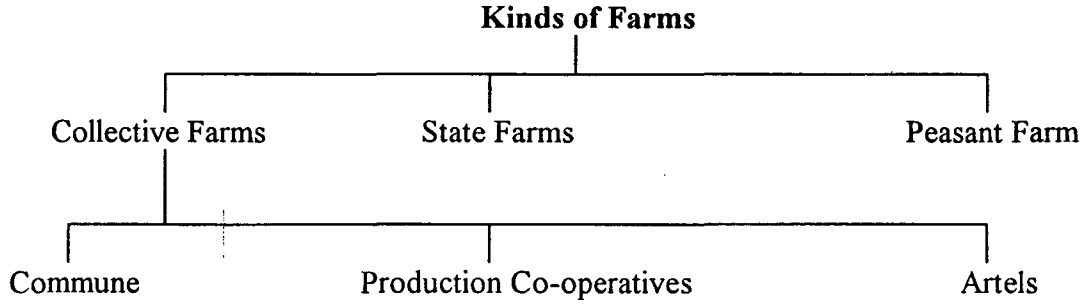
Year	Uzbekistan	Tajikistan	Turkmenistan	Kirghizia	USSR
1928	1.2	0.2	1.7	0.5	1.7
1929	3.0	NA	NA	NA	NA
1930	34.4	NA	NA	NA	23.6
1931	68.2	NA	NA	NA	61.5
1932	81.7	NA	NA	NA	NA
1937	95.0	NA	NA	NA	93.0
1938	97.6	NA	NA	NA	NA
1940	99.8	98.7	98.9	99.4	96.9

Source: A. Rahman Khan and Dharam Ghai, *Collective Agriculture and Rural Development in Soviet Central Asia*, (London: Macmillan Press, 1979), p.39.

[13] "The Collectivisation Campaign in Uzbekistan", Central Asian Review, op.cit., 1964, p.47.

[14] Ibid., p.47.

Besides the collective farms, there were several other farms, which are shown as follows:



Both collective and state farms were managed as government property. But while the collective farm was cultivated by the members of a society, a state farm was cultivated by the labourers who received wages from the farm management. The farmers who, in the past, were owners of their respective farms pooled their land and capital to form a large enterprise. After its formation, this enterprise began to be operated collectively by the former private farmers.

Peasant Farms

There were some tiny farms in Soviet Union, which were cultivated privately by farmers. Their existence was a contradiction in the socialized economy, necessitated by local situations.

State Farm

These farms were organised on the confiscated lands which remained surplus after distribution of land among the landless and the poor peasants.[15]

[15] Medvedev Zhores A., Soviet Agriculture (New York & London: W.W. Norton and Company, 1987), p.70.

The number of state farms increased after the Khrushchev's virgin land campaign especially in Kazakhstan.

Number of State farms in the Central Asian Republics (At the end of the Year)

	1940	1950	1952	1953	1954	1955
USSR	4,159	4,988	4,742	4,857	4,874	5,134
Uzbekistan	81	91	92	101	98	98
Kazakhstan	194	265	267	294	385	632
Kirghistan	36	48	50	59	57	57
Tajikistan	21	35	33	33	31	31
Turkmenistan	26	32	34	40	40	40

Source: National Economy of the USSR: *Statistical Returns,* Central Statistical Board of the USSR Council of Ministers, (Moscow: Foreign Languages Publishing House, 1957), pp.123.

States farms were exclusively owned and managed by government and worked by hired labourers. David A. Dyker sums up the position of the State farms in following words:

"... state farms operated under a peculiarly liberal financial regime. Many state farms received considerable subsidies from the central authorities, quite apart from the preferential treatment they received, compared with collective farms, in terms of taxation and procurement prices. State farm workers received fixed basic wage payments, and were understandably, usually, much better-off than collective farm workers... state

farms were the chosen instruments of the virgin lands scheme, perhaps the greatest political initiative of all.[16]

The government wanted to project state farms as demonstration farms and experimental units. The relationship obtained on a state farm was the employer-employee relationship as is industrial sector. In this way, rural life had been placed on par with life in the cities. Therefore, state farms were considered by the government as the ultimate universal pattern.

Primary Index of State Farm, in 1983

	No. of State farms	No. of State farms worker in 1000	Total Sown Area in ,000 hectare
USSR	22313	11933	109488
Uzbekistan	1136	1002	2399
Kazakhstan	2120	1397	31136
Kirghizistan	255	219	626
Tajikistan	284	174	387
Turkmenistan	124	71	180

Source: Norodnoe Kozyaistra, SSSR, 1983, p.288.

As regards the collective farm, there were several types which are listed as under:

i) Communes

ii) Production Co-operatives

iii) Artels

[16] David A. Dyker, The Soviet Economy, (London: Crosby Lockwood Staples, 1976).

In a commune, the entire production capital - such as cattle, machinery, barns, etc. were owned by a society. The members of this society employed the capital co-operatively in cultivating the land. All the members lived together cooking food in community kitchens. Their children were taken care of by community nurseries.

The second one was production co-operatives. The members of a production co-operative, however, were allowed to retain ownership not only of their land but also of their live stock and tools. Thus every means of production was privately owned.

Third type of collective farm was artel, which was some where in between the two extremes types of collective farming. In an artel the society owns most of the production factors but allows its members to own some of its, alongwith permitting them to undertake some personal production.

Collective Farms

A collective farm was a co-operative organisation of peasant who united voluntarily for purposes of large scale agricultural production on the basis of socialised means of production and collective labour.

Land which belonged to the whole people and the state was handed over to the collective farms for their free perpetual use. In addition to the state ownership of land, the economic basis of collective farming was the socialized ownership of the means of production.

Each collective farm was guided in its activities by the Model Rules, which set the following tasks:

"To strengthen and develop in every way the common enterprise, steadily to raise labour productivity and the efficiency of production."

"To increase the output and sale to the state of farm produce by the intensification and further technical re-equipment of collective farm production. Introduction of comprehensive mechanisation and electrification and wide-scale application of chemicalisation and land reclamation.

"To work under the guidance of the party organisation for the community education of the collective farmers".

"To satisfy more fully the growing materials and cultural needs of the collective farmers. To improve their living conditions and gradually transform the villages into well-appointed communities.[17]

[17] USSR: Third all-union Congress of Collective Farmers, Moscow 1969, cited in V. Mehta, "Svoiet Economic Development and Structure", (New Delhi: Sterling Publishers, 1978), p.268.

PRIMARY INDEX OF COLLECTIVE FARMS AT THE END OF 1983

	No. of collective farms in the end of the year	No. of house holds in collective farms (in 1000)	Average No. of collective farm workers (in 1000)	Funds of collective farms (in Million Rouble)	Gross income of collective farms (Million Rouble)	Area of common crops (1000 hectare)	Weight of Common Production of Animals (1000 head)		
							Cow	Pigs	Sheep & Goats
USSR	26,039	12,613	12,917	1,21,802	35,426	92,351	16,030	29,286	44,791
RSFR	12,006	4,467	4,619	43,441	13,518	53,440	7,840	12,307	22,808
Uzbekistan	855	812	1,041	4,732	2,684	1,426	229	83	1,076
Kazakistan	395	202	278	2,934	745	4,158	294	317	5,089
Kirgistan	181	158	192	1,646	616	556	113	109	4,182
Tajikistan	156	195	242	1,600	531	355	65	29	352
Turkmenistan	343	200	331	2,070	974	745	60	130	1,858
Central Asia as Whole	1,932	1,567	2,084	12,982	5,550	7,240	761	668	80,156

Source: Narodnoe Khozaistva, SSSR, 1983.
FINANCI E STATISTIKA, MOSCOBA, 1984, pp.280-81.

Live Stock Production

Collectivisation did have one major negative impact on the Central Asian agriculture. The attempt to go too far too fast led to resistance by the peasants[18] and particularly by the 'bias' and landlords. They slaughtered their live stock rather than hand over the same to collective farm.[19] In Kazakhstan, in 1935 there were only 1.7 head of cattle for each household grouped in a collective farm, and 6500 collective farms were altogether without a herd.[20] The livestock losses in Kazakhstan alone during the six years (1928-1934) were estimated at 73 percent of the cattle, 87 percent of the sheep and 83 percent of horses.[21]

As Warren Wilhelm has pointed out, "in the beginning, collectivisation was handled with incredible stupidity, so that it proved a disaster".[22] Soviets did not understand the psychology of peasantry. Large number of livestock was possessed by the Kazakhs, who for centuries pursued their nomadic way of life. In fact livestock rearing was done by nomads in every part of Central Asia, taking their herds to various pastures and valeys, according to season. The Central Asian nomads objected to collectivisation and when coercion

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[18] "The collectivisation campaign in Uzbekistan, 1927-33", Central Asian Review, vol.XII, no.1, pp.45-46.

[19] Ibid.

[20] Caroe, Olaf, Soviet Empire: The Turks of Central Asia and Stalinism, (New York: St. Martins Press, 1967), p.184.

[21] Ibid.

[22] Charles K. Wilber, op.cit., p.169.

was applied they began to slaughter their livestock.[23] So the collectivisation of livestock was stopped for a certain period in 1942 and the cattle breeders were allowed to resume their traditional way of rearing livestock.

Live Stock Number in Soviet Central Asia
(Thousand Heads)

Years	Horses	Cattle	Hogs	Sheep and Goats	Total in Livestock Units: 1928=100
1928	5,138	11,273	339	44,521	100
1933	1,382	3,643	214	8,655	23
1953	3,200	9,971	1,046	42,344	92
1962	--	13,881	2,878	51,681	129

Source: Charles K. Wilber, The Soviet Model and Underdeveloped Countries, (University of North California Press, 1969), p.169.

Such a huge loss in livestock could be recovered only after a long period of time. Since the Soviet emphasis was on cotton cultivation, and there was not a good management in livestock collective farm.[24]

It was Khrushchev, who after becoming Party General Secretary laid stress on stock breeding. He even allowed private auxilliary households to do stock breeding and allowed them to pasture in collective and state farm land. Hence the increase in number of live stock could be realised and it increased consistently till the Brezhnev period.

[23] Charles K. Wilber, op.cit., p.170.

[24] Olaf Caroe, op.cit., p.186.

Socialized Agriculture and Living Standard

In gauging the living standard of people of any notion, some social indicators are taken such as per capita income, consumption literacy rate, health condition. In Socialized country the facility of medical care, education and other public services are provided by the state free of cost at the time of these services being rendered. So our main focus would be on the distribution of income and the income which earned as a wage in collective or state farm. IN same time assessing one's living standard is a relative term so we will do comparison with rest of the USSR and with other republic of the USSR.

Central Asian economists often assert that the general living standard in this region is lowest in the USSR. Once a Tajik economist M. Makhshulov had stated that - "As is well known, the Central Asian republics at the present time lag some what behind the general indices for the average living standard in the country as a whole and also in other republics of the USSR".[25]

Boris Rumer tried to test the above mention statement taking the average monthly wage as a indicator of peoples condition.

[25] Boriz Z. Rumer, "A Tragic Experiment", Soviet Central Asia, p.123.

Average monthly earnings per employee in all types of economies (in Rubles)

	1970	1980	1984	Percentage increase during 1970 to 1984
USSR	122	169	185	51.63%
Baltic Region	134	176	192	43.28%
Transcaucasus Region	113	152	165	46.01%
Central Asia	119	156	163	36.97%

Source: Boriz Z. Rumer, "A Tragic Experiment", Soviet Central Asia, p.125.

The data demonstrate, the average monthly income in Central Asia throughout the period examined here was lower than in the USSR. Though the earning of the people also increased in the region but in lesser amount as compare to the rest of three region mentioned in the data. Even in 1970 the monthly income in Transcaucasus was below Central Asia had jumped the Central Asian figure in 1984 and registered 1.22% above the Central Asia.

In Central Asia more than fifty percent people were engaged in agricultural work at either Collective farm or State farm. So, to know their condition, it will be better to go through the following data.

Average daily wages in Collective farm
(in rubles)

	1960	1965	1970	1975	1978	1979
USSR	1.40	2.65	3.90	4.54	5.22	5.35
Uzbekistan	1.55	3.29	4.24	4.60	na	5.41
Kazakhstan	na	na	4.82	na	na	na
Kirghizia	na	3.27	3.72	na	na	na
Tajikistan	na	3.21	4.17	4.53	4.99	na
Turkmenistan	na	na	6.03	5.43	na	na

Source: D. Gale Johnson and Karen McConnell Brooks, Prospects for Soviet Agriculture in the 1980's, p.177 and A. Rahman and D. Ghai, op.cit., p.15.

Average daily wages in State farm
(in rubles)

	1960	1965	1970	1975	1978	1979
USSR	2.31	3.21	4.43	5.51	6.23	6.36
Uzbekistan	na	2.91	4.23	na	na	na
Kazakhstan	2.76	3.65	4.81	na	6.37	na
Kirghizia	na	2.96	3.66	na	na	na
Tajikistan	na	3.23	3.84	na	4.95	na
Turkmenistan	na	na	na	na	na	na

Source: D. Gale Johnson and Karen McConnell Brooks, Prospects for Soviet Agriculture in the 1980's, p.177.

Collective farm earnings in Central Asia and the rest of the country were becoming more or less equal. By 1970, however, payment per man day in the collective farms of Tajikistan was 7% higher than that of the USSR and

in 1978 was less than that of the USSR by 1.5%. Similarly in state farm, payment per man day in Tajikistan was 0.62% higher than that of the USSR and it fell down to 25.85% less in 1978, while Kazakhstan registered some percent higher than that of the USSR in 1978. The data presents the income difference in collective and state farm in different republics while there sectoral income differences also existed in Central Asia. Average monthly wage in a collective farm was always below than that of state farm and at the same time wage in state farm was below than that of industry owing to these differences.

Average Monthly Wage in Difference Sector in 1970 (in Rubles)

	Collective Farm		State Farm		Industry	
	1970	1980	1970	1980	1970	1980
Uzbekistan	92.3	130.0	98.6	152.8	123.5	166.7
Kazakhstan	99.9	139.4	121.0	169.3		187.6
Kirghizia	83.1	117.6	84.0	123.8	125.6	169.5
Tajikistan	86.1	129.8	88.7	121.4	120.3	158.2
Turkmenistan	126.3	152.3	135.9	167.1	134.4	188.8

Source: Narodnoe Khoziaistva, SSR 1988g, pp.81, 83 and 378.

There was a major difference in the way of life of a collective farm worker's family and a Industrial labourer's family. This feature existed not only in Central Asia but in the USSR as a whole. Differences can be observed by given data.

Structure of Income and Expenditure of Collective Farm Worker's Family
(in percentage)

	1940	1965	1970	1975	1980
Total Family Income of which	100	100	100	100	100
Income from the Kolkoz	39.7	39.6	40.0	43.7	43.9
Wages and Salaries of Family members	5.8	7.4	8.4	8.1	9.6
Pensions, stipendia, assistance and other payments and benefits from social consumption funds (Inc. free education, Medical Care, etc.)	4.9	14.6	17.9	21.4	19.5
Income from Private auxilliary activities	48.3	36.5	31.9	25.4	25.3
Income from other source	1.3	1.9	1.8	1.4	1.7
Use of Total Income (Expenditure) of which	100	100	100	100	100
Food	67.3	45.2	40.4	37.1	35.9
Foot Wear	10.9	13.7	15.7	15.7	16.5
Purchase of Furniture, household leisure goods (Inc. bicycles, motorcycle etc.)	1.1	4.2	4.9	5.9	6.7
Fuel	3.8	2.0	1.8	1.6	1.5
Services	4.4	14.0	15.0	16.8	15.0
of which : education, medical care and other services provided free from social consumption funds	3.4	10.0	10.8	12.3	10.5
Accumulation (growth of personal cash holdings savings, bank deposit, etc.	6.3	8.0	6.4	6.0	7.3
Taxes	1.4	1.4	1.3	1.2	1.5
Other expenditure	4.1	8.9	11.7	13.0	13.7

Source: Roger A. Clarke and Dubravko J.I. Matko, Soviet Economic Facts (1917-81), (London: Macmillan Press, 1983), p.52.

Structure of Income and Expenditure of Industrial Worker's Family
(in percentage)

	1940	1965	1970	1975	1980
Wages and salaries of family members	71.3	73.1	74.4	74.3	74.2
Pensions, stipendia, assistance and other payments and benefits from social consumption funds (Inc. free education, Medical Care, etc.)	14.5	22.8	22.1	22.5	23.3
Income from Private auxilliary activities	9.2	1.7	1.3	0.9	0.7
Income from other source	5.0	2.4	2.2	2.3	1.8
Use of Total Income (Expenditure) of which					
Food	53.8	37.9	35.7	32.9	31.7
Cloth and Foot Wear	11.1	13.9	15.5	15.4	16.1
Purchase of Furniture, household leisure goods (Inc. bicycles, motorcycle etc.)	1.7	6.1	5.8	6.5	7.2
Fuel	1.2	0.4	0.3	0.2	0.1
Services	17.6	24.3	23.5	23.1	23.5
of which : education, medical care and other services provided free from social consumption funds	9.0	13.6	13.9	13.8	14.1
rent communal services and maintenance of private housing	2.9	2.7	2.7	2.7	2.7
Deposits	4.7	2.8	4.1	6.3	5.9
Taxes	4.1	7.2	7.9	8.5	8.7
Expenditure	5.8	7.0	6.8	6.8	6.4

Source: Roger A. Clarke and Dubravko J.I. Matko, Soviet Economic Facts (1917-81), (London: Macmillan Press, 1983), p.51

Budget of a collective farm family was more depended on private auxilliary activities. In 1940, the income from private auxiliary activities of the collective farm workers was 48.3 percent of the net income though it was decreases, to 25.3 percent in 1980, while the industrial worker's income from the same was only 9.2 percent in 1940 and reduced to 0.7 percent, a negligible percent if compared to the collective farm worker's private auxiliary income.

The expenditure of the collective farm workers for their food was 67.3 percent in 1940 while reduced to 35.9 percent in 1980 whereas the same for the industries workers was 53.7 percent in 1990 and 31.7 percent in 1980. Thus it proves that at every point of time the industrial workers used to spend less for their food, compared to the collective farm workers which means the industrial workers are left with more money for their other needs and luxuries. For example, the industrial worker's expenditure, in his purchase of furniture, household leisure goods (bicycles, motor cycles etc.) was 1.7 percent in 1990 and 7.27 in 1980, whereas the collective farm workers expenditure for the same 1.1 percent in 1940 and 6.7 percent in 1980. Though the comparison in percentage prove the gap between the standard of living between them, but if we go back to Table of average monthly income in different sectors, we can see that there is a immense gap of income between the industrial and collective farm workers. The gap of their income and their percentage in expenditure proves that the industrial workers used to spend much more for their luxuries than the collective farm workers.

CHAPTER IV

DEVELOPMENT IN AGRICULTURAL SECTOR

DEVELOPMENT IN AGRICULTURAL SECTOR

Agriculture has been a key sector of production in Central Asia contributing about one-third to the national income of USSR as well as of Central Asia.

The soil of the Central Asia is no doubt, fertile, however, it is not suitable for agriculture. There are some natural obstacles for doing agriculture in the region - hot summers, and severe winter. Consequently, Central Asia registered only four percent precipitation in a year, besides having very less humidity. In order to overcome these handicpas the Soviets developed irrigation system, carried out mechanisation of agriculture, and introduced chemical fertilizers to maintain the fertility of soil.

Irrigation System in Central Asia

It was quite impossible to develop Central Asia as a agricultural zone without developing irrigation system. Inspite of aridity of the region it has a number of rivers on which irrigation projects have been developed. They either vanish into the sands or finish their courses in lakes. Only the biggest, Amu-Dariya and Syr-Dariya reach the Aral Sea. The amount of water in river is controlled by the snow and glaciers in the mountain, so that the bigger rivers carry an increased amount of water twice a year: at the beginning of summer when the lower lying snows dissolve and in the middle of summer

when the eternal snow and glaciers high in the mountains melt.[1] Amu-Dariya the largest river in Central Asia, originates the Pamirs and the river flows through Tajikistan, Uzbekistan, Turkmenistan and back into Uzbekistan before discharging into the Aral Sea. Other rivers, are Atrek, Murgab, Ili, Chu and Talass. The Atrek, Murgab, rise in mountain of south, the former flowing into the Caspian Sea while the latter two drain into the Karakum desert.[2]

Long before the appearance of the Russians, artificial irrigation had been practised in Central Asia traditional lines for many centuries. Even archeological evidence shows that the artificial irrigation system was developed in the region.[3] Greek historian Strabo, in his geography written, at the beginning of the first century A.D. referred to an irrigation system which was developed from the waters of the River Atrek.[4] In many other areas such as the valley of Zeravshan and even the Golodnaya steppe, traces of irrigation works can still be found.[5] The traditional system existing at the time of the Russian conquest consisted of a main irrigation canal (*Aryk*) leading from a river, from which a number of smaller channels branched off to feed the individual fields of each village.[6]

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[1] "Irrigation in Central Asia", Central Asian Review, Vol.VIII, No.1, 1960, p.44.

[2] Sarah L. O'Hara and Tim Hannan, "Irrigation and Water Management in Turkmenistan: Past System, Present Problem and Future Scenarios", Europe Asia Studies, Vol.51, No.1, 1999, p.22.

[3] N.F. Glazovski, "Ideas on an Escape from the Aral Sea Crisis", Soviet Geography, vol.XXXII, no.2, Feb. 1991, p.73.

[4] G. Wheeler, op.cit., p.3.

[5] Ibid.

[6] Ibid.

Tsarist government observing the Agricultural potential of Central Asia for cotton cultivation, planned to increase the agricultural area by improving the existing irrigation system and constructing new canals. The first successful canals in the region were the Bukhara-Aryk and the Khiva-Aryk with irrigation capacity of 12,000 *desyatins*.[7] Tsarist government also planned to construct some mega irrigation project. For example in 1908 the Russian engineer M.N. Ermolaer suggested diverting the Amu-Dariya westward to irrigate an additional 565000 hectare of land in Karakum desert, while in 1915 F.P. Morguchenov suggested that an additional 11.4 million hectare of land between the Amu-Dariya and Caspian Sea could be irrigated by diverting the Amu-Darya along the course of the old Uzboi river.[8] Despite the initial enthusiasm for the projects financial backers could not be found[9] and the projects could not be implemented. However, the Russian authorities completed two major irrigation projects those of the Golodnaya Steppe (Hungry Steppe) and on the Murgab river.[10]

During the Soviet period, the traditional system of irrigation was doomed due to land reforms. So large scale projects were quickly envisaged. In may 1918, the Council of People's Commissars allocated 50 million rubles for the development of an additional 550000 hectares of land by developing irrigation. But lack of resources, skilled personnel and equipment prevented

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[7] R.A. Pierce, op.cit., p.176.

[8] Sarah O'Hara and Tim Hannan, op.cit., pp.24-25.

[9] R.A. Pierce, op.cit., pp.180-181.

[10] G. Wheeler, op.cit., p.2.

any such projects from being undertaken until the mid 1930's.[11] According to Soviet historian, between 1924-38 the irrigated area of Turkmenistan was almost doubled.[12] In Tajikistan the first stage of the Vakhsh valley project was completed by 1935, and a new system of canals with a total length of 13,000 km was constructed. First major engineering project was the great Ferghana valley canal built by mass manual labour in 1939.[13] The Ferghana valley irrigation system was latter extended to include the north and south Ferghana canals. It was spread towards alluvial fans slopes which was ideal condition for gravity-flow irrigation.[14]

Inter-Republican Irrigation Network

CHU-Canal

The Soviets, undertook mega irrigation projects in order to irrigate the area belonging to more than one Central Asian republic. For instance, the great Chu canal serves Kirghizia and adjoining part of Kazakhstan. However, Chu is one such river in Central Asia as it does not provide enough water, when required for crops. Besides due to the rapid melting of glaciers in the second half of summer, it causes floods. To check this, the Orto-Tokoy reservoir has been made with a capacity to store 500 million cubic metres of

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[11] G. Wheeler, op.cit., p.172.

[12] Ibid.

[13] Ibid.

[14] P.E. Lydolph, Geography of the USSR, (Second edition), (London: John Wiley, 1990), p.248.

water in order to regulate the whole flow of the river.[15] At the Chu river two barrages have been constructed to irrigate both Kazakhstan and Kirghizia.

Kyzylkum desert is spread in about 300,000 square kilometres between the Amu-Darya and Syr Darya. So Kazakhstan and Uzbekistan unitedly developed the Kyzylkum canal for bringing the cultivable area under agriculture. The dam was constructed on the Syr-Darya.

The Great Ozerngy Drainage Canal

This canal is constructed in Southern Khorezm, which is divided between Uzbekistan and Turkmenistan. So both these Republics being interested in improving the condition of the soil in this agricultural area developed this project. In the first state of Ozerngy drainage canal, a pilot channel of 212 kilometre was opened in 1961 and by the end of 1961 it had already carried away 50 million cubic metre of water. It can carry 40 cubic metre of water a second and enable hundreds of thousands of hectares of marsh land to be reclaimed besides improving the condition of land that was already cultivated.[16] The 180 km of Daryalk drainage canal which joins the Ozerngy was finished in mid 1960's and made able to carry 45 cubic metres of water in a second.[17]

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[15] See for details "Irrigation in Central Asia", Central Asian Review, Vol.III, No.1, 1960, p.46.

[16] "Irrigation: Progress Since 1960", Central Asian Survey, Vol.IX, 1982, p.140.

[17] Ibid.

These are the major irrigation project which serve the inter republican region in Central Asia. Besides, there are many other important projects in each Central Asian Republic.

Uzbekistan

The Great Ferghana Canal

The Ferghana canal project was one of the three big projects in the country along with the Dnieper Dam and Magnitogorsk. The main canal system is about 200 miles long completely encircling the Ferghana basin. Many feeder canals distribute the water over much of the basin floor. Only the lowest central portion of the basin is not utilised because it is too sandy and salty for cultivation.[18] The Namangan irrigation canal was constructed in the north side of the basin parallel to the Great Ferghana Canal and made able to irrigate 30,000 hectares of land.[19]

Amu-Karakul Canal

Along the Zaravashan valley there are three fertile oases: Samarkand, Bukhara and Karakul. But the rivers could not adequately irrigate them. So, to irrigate these oases adequately, the Amu-Karakul project was started in 1959. The canal starts from Amu-Darya and crosses the Kyzylkum in the

[18] P.E. Lydolph, op.cit., p.248.

[19] Ibid.

north-eastern direction towards Karakul. It irrigates 40,000 hectares of land in the Alat and Karakul.[20]

Amu-Bukhara Canal planned to bring water from Amu-Darya with gravitational flow. In February 1963 government decided to construct the canal to irrigate 90,000 hectare of Bukhara oases.[21]

The Kokand Hydro-Knot

The Kokand region has very fertile soil which could not be adequately used due to shortage of water. The region depended on Sokh river which did not supply enough water. A solution has been found in the construction of Kokand Hydro-knot which collects all the Sokh water for irrigation. It can accommodate 640,000 cubic metres and feed the canals which irrigate the land of Gorskoya, Frunze Uzbekistanskiy, Leningradskiy and Buvaydinskiy and also feed the Great Ferghana canal.[22]

Other Project and Reservoirs

Surkhan-Darya reservoir: It collects the flood water of Surkhan-Darya with capacity to hold 900 million cubic metres of water. Its area is 64 square kms and irrigates 150,000 hectares of cotton planted land which was desert earlier.

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[20] Irrigation in Central Asia, op.cit., p.144.

[21] Irrigation: Progress Since 1960, op.cit., p.143.

[22] Irrigation in Central Asia, op.cit., p.144.

Chim-Kurgan reservoir was built in the Kashka-Darya oblast to regulate the flow of the river Kashka-Darya.

Tyuya-Buguz reservoir is in the Chirchik-Angren basin with a capacity to irrigate 20,000 hectare of land.

The Tuyamuyun water engineering project in Uzbekistan was completed in December 1981 to irrigate land in Korezm oblast, the Karakolpak and Tashauz oblast.[23]

By 1982 Uzbekistan had internal reservoirs with a total of 6,000 million cubic metres of waters and inter-republican reservoirs with a total capacity of over 30,000 million cubic metres of water.[24] One thousand pumping stations supplied water to over 1,200,000 hectare of irrigated land. In the period 1976-80, 214,000 hectare of newly irrigated land was brought under cultivation; improvements were made on 481,000 hec. Major planning work was carried out on 290000 ha; and irrigation system was reconstructed and the water supply improved on 1,000,000 hectared.[25]

Kazakhstan

Irtysh-Karaganda Canal starts from Irtysh later follows the river valley to Karaganda, providing water from coal fields to collective farms and state

[23] Summary of World Broadcast, SU/W1167/A/8, 8 January 1982.

[24] Summery of World Broadcast, 26 March 1982, SU/W1178/A/4.

[25] Ibid.

farms along the course of the canal. Its total length is 500 kms and irrigates the northern part of Kazakhstan.

The Kushum-Ural Network is in the western part of Kazakhstan. An abandoned bed of the Kushum river, tributary to the Ural River, was widened to serve as the central canal for the system. It has a capacity to carry a stream of water, 50 metres wide and 5 metres deep, and has four reservoirs along its route. The total length of the canal network is 2000 kms and irrigates 1 million of arable land and some 20,000 hectares of Meadow land.

Alma-Ata Oblast - In the oblast, construction of a large irrigation system was finalized in 1982.[26] The canal extended along the right bank of the river Illi for 600 km. In the beginning of 1982 Kazakhstan had of 20,00,000 hectares of land under irrigation and in the end of the year additional 80,000 hectares of land were brought under irrigation.

Turkmenistan

The Kara Kum Canal is the largest irrigation project in Turkmenistan, taking water from the Amu-Darya to Ashkabad to quench the thirst of southern Turkmenistan. The canal was completed upto Ashkabad in 1962.[27] For the control of flow in the canal, several reservoirs such as *Sary-Yazy, Tedzeh, Khor-Khor* and Khan-Khauz were constructed. These reservoirs help

[26] Summary of World Broadcast, 17 December 1982, SU/W1216/A/5.

[27] P.E. Lydolph, op.cit., p.250.

in preserving the flood water and releasing water in Summer.[28] The total length of the canal is 1100 km.[29]

In 1982 Turkmenistan's reservoirs had a total capacity of 1600 million cubic metres of water. The Karakum canal irrigated 500,000 hectare of land, most of which was not previously cultivated.[30]

Tajikistan and Kirghizia

The Kayrak-Kum "hydro-knot"

Although the Kayrak-Kum project was initially constructed for power project, it plays an extremely important role in irrigating northern Tajikistan. The reservoir feeds twelve networks irrigating the lower lying districts of Tajikistan. It was completed in 1956 and had a capacity to irrigate 10,000 hectares with natural flow and 23,000 hectares with the help of pumping stations.

Muminabad Reservoir

A dam 1,338 metres long and up to 35 metres high has constructed with capacity to reserve 24 million cubic metres of water. It is used to irrigate the cotton plantation of Muminabad.

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[28] For detail about reservoir, see the progress report of the project in "Irrigation in Central Asia", Part II, Central Asian Review, vol.VIII, no.2, 1960.

[29] Summary of World Broadcasts, SU/W1186/A/5, 21 May 1982.

[30] Ibid., See also Sarah L.O'Hara, Agriculture and Land Reform in Turkmenistan Since Independence, Post Soviet Geography and Economics, 1997, Vol.38, No.7, pp.432-33.

In Kirghizia the annual flow of water was 60 milliyard cubic metres of which only 15 percent were used for irrigation. But even this amount was not used to the best advantage. To improve the situation several projects were constructed.

Otuz-Adyr Canal: In 1957, the Otuz-Adyr canal in southern Kirghizia was completed. The main canal is 43 km long and the total network is 265 km and irrigated 7000 hectates of reclaimed land.

With reservoirs such as Kara-Ungur, Ak-Bura in Feb. 1982 Kyrgyzia had almost 10,00,000 hectares of land under irrigation. Water was supplied by 600 sources, mostly mountain rivers. the total annual run-off was more than 50 cu km., of which 8500 million cubic metres goes for irrigation. To distribute this water, there were 28000 km of canals.[31]

Area of Irrigated Land in Central Asia
(in million hectare)

	1970	1975	1980	1981	1982
Uzbekistan	2696	3006	3476	3565	3656
Kazakhstan	1451	1648	1961	2002	2047
Kirghizia	883	910	955	964	974
Tajikistan	518	567	617	626	634
Turkmenistan	643	819	927	944	1011

Source: Narodoe Koziaistva, SSSR 1983, p.252

[31] Summary of World Broadcast, 21 May 1982, SU/W1186/A/4.

Mechanisation and Chemicalisation of Agriculture

Although, mechanisation of agriculture is essential in the new era, it was more essential for Central Asian agriculture. In socialized agriculture the size of farm was huge and in such a huge farm, agriculture could not be done by traditional methods. The mechanisation process was started with collectivisation campaign in Central Asia by establishing MTS. The first functioning MTS appeared in Central Asia in 1929[32] and it rose rapidly till 1955.

Number of Machine and Tractors Stations in Central Asia

	1940	1950	1952	1953	1954	1955
USSR	7069	8414	8807	8985	8994	9009
Uzbekistan	188	244	261	265	266	267
Kazakhstan	331	385	439	454	459	486
Kirghizia	65	72	77	81	86	86
Tajikistan	51	61	67	69	71	71
Turkmenistan	54	59	72	72	73	73

Source: Narodoe Koziaistva, SSSR 1983, p.253.

Though Central Asia had surplus agricultural labour, it was still difficult to reach the optimium level of agricultural production. Unpredictable weather and dry climate have remained major constraints in Central Asian

[32] R.R. Sharma, Marxist Model of Social Change: Soviet Central Asia: 1917-1940, (Delhi: The Macmillan of India, 1979), p.134.

agriculture. After the Khrushchev's virgin land campaign and amalgamation of collective farms, the average size of farms rose above than that of USSR as a whole. In USSR the average collective had 1,000 to 5,000 acres of land. 71 percent collective farms had more than 5000 from which 40 percent had above 12,000 acres.[33] So sowing such a vast plot within a time frame due to climate constraints would not be possible without mechanisation. Hence, the policy of intensive mechanisation was adopted in Central Asia. For Uzbekistan the tractors per 100 hectares of sown area increased from 26 to 39 over the period 1965-1980.[34]

Mechanisation of Agriculture in Central Asia

	Tractors per 1000 hectares of arable land		Harvester per 1000 hectares		Energy use per worker (horse power)	
	1970	1986	1970	1986	1970	1986
USSR	9.0	12.1	5.5	8.0	8.7	26.8
Uzbekistan	40.0	49.0	5.7	25.9	5.9	10.1
Kirghizia	18.5	20.1	6.2	10.6	9.2	15.7
Tajikistan	27.9	43.0	3.5	12.0	6.1	7.9
Turkmenistan	40.2	39.3	11.5	11.3	9.0	13.0

Source: Ajay Patnaik, "Agriculture and rural out migration in Central Asia", Europe Asia Studies, Vol.47, No.1, 1995, p.151.

[33] P. Alampiev, Soviet Kazakhstan (Moscow: Foreign Languages Publishing House, 1958), p.72-74.

[34] D.M. Naehane, "Regional Planning in the USSR: A Case Study of Soviet Central Asia" in R.G. Gidadhubali (ed.), Socio Economic Transformation of Soviet Central Asia (New Delhi: Patriot Publication, 1987), p.149.

Despite, using tractors, harvesters and electric power in Central Asia, another form of mechanisation such as use of helicopters in spreading pesticides and chemical weeding of the wheat fields and in orchards and woods was also practised in Central Asia. In animal husbandry fodder was prepared and transported mechanically and machine was used for milking. Electrical sheep shearing was widely practised.[35]

Besides, there was intensive use of mineral fertilizers Central Asia. MTS were also responsible for the storage and distribution of fertilizers.

However, as a result of the intensive agriculture, the natural fertility of land was losts. If a field is sown to a particular crop for a long period of time, soil nutrients are exhausted resulting in the lower yields. Hence the need for successive increase in fertilizer application in Central Asia to restore soil fertility.

Central Asian agriculture was developed for cotton cultivation specially in Uzbekistan and rotational cultivation was done only in 61 percent of total cultivated land. Hence the demand for fertilizers went up rapidly. In 1953 Central Asia was consuming one third of the total fertilizer production in the USSR.[36] The demand for fertilizers grew more after the crop failure in virgin land of Kazakhstan. by 1960 the yield of wheat was adversely effected

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[35] P. Alampiev, op.cit., p.76.

[36] Charles K. Wilber, The Soviet Model and underdeveloped Countries, (University of California Press, 1969), p.

due to unavailability of fertilizers. But after Brezhnev came to power, the supply of fertilizers was raised to sizeable amount.

Supply of Mineral Fertilizer(Thousand Ton)/Use of Fertilizer (kg/hec)

	1970	1975	1980	1981	1982	1983
USSR	10317 / 468	17251 / 775	18763 / 839	19176 / 856	20152 / 900	22977 / 1025
Uzbekistan	728 / 2034	925 / 2383	1102 / 2631	1121 / 2633	1158 / 2680	1210 / 2763
Kazakhstan	258 / 75	507 / 144	582 / 165	622 / 176	630 / 178	893 / 252
Kirghizia	131 / 1033	192 / 1465	204 / 1539	216 / 1623	224 / 1683	248 / 1857
Tajikistan	136 / 1650	180 / 2203	193 / 2253	220 / 2566	219 / 2531	234 / 2686
Turkmenistan	134 / 2053	197 / 2413	225 / 2480	238 / 2590	246 / 2509	251 / 2449

Source: Narodnoe Kozyaistva SSR 1983, p.251.

Use of mineral fertilizers was high in Central Asia and was many fold higher than that of the USSR and RSFSR because of cotton monoculture. Cotton cultivation took additional 116 kg/hec of fertilizers to maintain the yield. Otherwise the yield would drop by 25 percent.[37]

Production of Crops

Cotton

In Central Asia the Soviets laid stress on cotton cultivation hence the yield per hectare of cotton was increased and it became highest in the world by 1976.[38]

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[37] David R. Smith, Growing Pollution and Health Concerns in the Low Amu-Darya Basin, Uzbekistan", Soviet Geography, Vol.XXXII, No.8, October 1991, p.556.

[38] A.R. Khan and D. Ghai, Collective agriculture and rural development in Soviet Central Asia, (London: The Macmillan Press, 1979), pp.62-63. See also Charles K. Wilber, op.cit., p.172.

Major Cotton Producers of the World, 1976

	Total Production in ,000 tons	Yield Per hectare Tons of Raw Cotton
USSR	2800	2.82
China	2400	1.47
USA	2298	1.35
Uzbekistan	1800	3.00
India	1146	0.46
Pakistan	515	0.84
Turkey	470	2.10
Brazit	390	0.66
Egypt	386	1.95
Tajikistan	288	3.00
Turkmenistan	356	2.13
Kirghizia	71	2.88

Source: A.R. Khan and Dharm Ghai, op.cit., p.63.

Cotton yield in Central Asia was raised through mechanisation of agriculture, better agrotechnics, improvement in cotton seeds, greater use of mineral fertilizer, expansion of sown area, exptension of irrigation and monetary incentives to the cotton grower.[39]

[39] Charles K. Wilber, op.cit., p.172.

In 1963 the yield of cotton lint in the United States was 517 lb per acre and in Central Asia 637 lb per acre.[40] But after 1981, cotton yield per hectare in Central Asia began to decline.

Harvest of Cotton (hundred kg/hectare)

	1940	1971-75	1976-80	1981	1982	1983
Uzbekistan	150	285	313	322	317	314
Kazakhstan	92	266	270	274	224	223
Kirghizia	148	276	283	245	182	138
Tajikistan	162	307	307	304	295	288
Turkmenistan	140	231	227	226	226	232

Source: Norodnoe Khoziaistva, SSSR, 1983, p.233

Yields and Cost of Cotton Production in Collective Farm and State Farm in Uzbekistan and Tajikistan (in 1976)

	Uzbekistan		Tajikistan	
	Collective Farm	State Farm	Collective Farm	State Farm
Output/hectare (tons of raw cotton)	3.3	2.56	3.08	2.45
Cost of production (Rubble/ton)	417	441	467	450
Direct Labour cost (Man hours/ton)	330	260	400	320

Source: A.R. Khan and D. Ghai, Collective Agriculture and Rural Development in Soviet Central Asia, p.64.

As seen in the above table, collective farm produced more output per hectare with high cost of production as compared to the state farm. The

[40] Ibid.

output per hectare was 28.9 percent greater and cost of production was 5.75 percent lesser than that of the state farm in Uzbekistan. Similarly the output per hectare in collective farm in Tajikistan is greater was 25.7 percent while cost of production.

Cost of Production of Cotton in Collective Farm and State Farm in 1983 (One ton product in rubles)

	Collective Farm	State Farm
USSR	561	629
Uzbekistan	514	631
Kazakhstan	480	292
Kirghizia	564	751
Tajikistan	608	630
Turkmenistan	657	832

Source: Narodnoe Khoziaistva, SSSR 1983, p.278, 290.

Production of Grains and Other Crops

Since the nineteenth century, Central Asia has been a deficit area in grain production. But after the 'virgin land' programme in Kazakhstan these situation changed. The old grain areas are mainly located on poorer soils with only 10 percent area being irrigated. Thus yields have always been low. The extensive cultivation of new lands produced good yields in the beginning, but production declined after 1958.[41] The production of grains declined in the beginning of 1960's, as more emphasis was put on the

[41] Charles K. Wilber, op.cit., p.173.

cultivation of cotton. Thus the total area for grain production was also reduced, as the extra land (cut from grain cultivation) was devoted to cotton cultivation. But Khrushchev's virgin land programme solved the problem as Kazakhstan's virgin land was much suitable for grain cultivation. And by facilitating grain farming with irrigation, machines and mineral fertilizer, the production of grain per hectare also increased, as becomes clear from the data given below:

Production of Grain in Central Asia

	Area ,000 hectare	Production ,000 tons	Yield 00 kg/hect
1913	6629	3984	6.0
1940	8825	3613	4.1
1958	25492	23667	9.3
1961	24371	15999	6.6

Source: Charles K. Wilber, The Soviet Model and underdeveloped Countries, p.174.

Grain Yield/hectare (in metric tons)

	1940	**Average 1961-65**	**Average 1966-70**	**Average 1971-75**	**1976**
Central Asia (Average)	--	--	--	--	1.82
Uzbekistan	0.41	0.67	0.74	0.95	1.69
Tajikistan	0.59	0.61	0.66	0.83	1.14
Kirghizia	0.76	1.02	1.56	1.87	2.28
Turkmenistan	0.57	0.72	0.86	1.40	2.10
USSR	0.86	1.02	1.37	1.47	1.75

Source: A.R. Khan and D. Ghai, Collective Agriculture and Rural Development in Soviet Central Asia, p.74.

In Central Asia after 1940 there is continuos increase in productivity per hectare. During 1940's yield per hectare in Central Asia was below the level of USSR as the whole and in 1976 there was 4 percent increase in yield per hectare. Increase in yield per hectare and increase in total shown area caused the increase in gross product of various crops.

Crop Production in Uzbekistan
(in ,000 tons)

	1976	1977	1979	1980	1982	1983
Wheat	na	243	na	na	na	na
Maize	na	925	1052	1251	1884	1891
Rice	na	363	455	503	423	558
Cotton	5335	5680	5762	6237	6000	5921.3
Potato	190	208	228	242	335	373
Other vegetables	1710	1844	2241	2429	2537	2630
Grapes	390	344	na	na	548	689
Other fruits	595	751	na	na	845	952

Source: Europa World Year Book 1982, p.1304 and 1986, p.2701 and 1987, p.2824.

There was a noticeable increase in all types of crops till 1983, irrespective of bad weather in some crops year. But there was a down fall in cotton production for which Uzbekistan is specialized. The total output of cotton in Uzbekistan decreased by 5.33 percent in 1983 since 1980.

CHAPTER V

CONCLUSION

CONCLUSION

Before the October revolution Central Asian agriculture was entirely based on feudal relations. Large part of agricultural land was in the hands of Bias (landlords). Agriculture was done by the poor and landless peasants in the land of landlords on the basis of Chairkari (Shar-Croping) which was absolutely favourable to landlords, and peasants were forced to persue miserable condition of life. Although the Russian government did some reforms in agricultural sectors, it could not change the condition of poor and landless peasants. The Russian policy did favour the landlords and moneylenders. It was during the Soviet period the situation began to change in favour of the peasants.

The October revolution not only wiped out the fedualism and destroyed the principles of exploitation of man by man but also forged the path of agricultural development. By the first agrarian law, Soviet government were able to confiscate the landed proprietors estate, nationalised all lands and distribute it free among the toiling peasants. The taxation on land were made liberal so that peasants could have some profit from it.

After confiscation of land and redistribution, collectivisation of land was introduced. It was a good idea to collectivise the peasant households because most of the peasants lacked agricultural implements and even they were not

able to adopt the modernised form of agriculture. By collectivisation and establishment of MTS, made the peasants use the modern technique of agriculture to get much crop from the land. Thus collectivisation made agriculture in Central Asia advanced. But the way in which collectivisation drive was launched in Central Asia was not suitable for the region. Lenin's idea of collectivisation was more pragmatic as the wanted to introduce it by setting example of benefits of collective farming. After his death Stalin ignored this idea and collectivised all the households abruptly. Hence it affected adversely in agricultural output especially in livestock products. The policy of collectivisation was directed both at the settled farmers and at the nomads. Collectivisation of settled farmers was easier but nomads began to slaughter their livestock instead of surrendering them to the collective farms.

The nomads were basically wandering people, and when they were forced to join the collectivisation process and submit all their livestock, they felt this a threat to their livelihood. At the same time it was true that the collectivisation process made them settle at one place and get themselves acquainted with the modern techniques and modern facilities of everyday life.

In the time of collectivisation process, state farm also emerged in Central Asia. By the method of intensive agriculture, agricultural production increased, but much of collective and state farms were engaged in Cotton Cultivation and few were indulged in other activities of agriculture. Hence the private auxiliary households were main contributors of vegetable and livestock products. Cotton became prime crops in Central Asia as a ressult of Soviet

policy to increase the production of Cotton. In every plan period and even every harvesting year they set increased target for cotton production. As a result of this policy much part of agricultural land were devoted to cotton cultivation only. For meeting the target of plan in cotton cultivation and other crops, some mistakes were committed for which Central Asia is suffering now.

As we observed the Central Asian agriculture is totally based on irrigation, hence Soviets developed extensive irrigation project in the region. Much part of water flow of the rivers was turned to cotton and grain fields, as a result of water diversion, the volume of river discharge in Aral sea has changed. Hence the sea level fell from 53 meter in 1960 to 40.3 metre in 1987 the surface area from 67,000 to 41,000 km^2, and the volume decreased from 1,604 to 404 km^3.[1] Hence the days of dust storm is increased in the coastal regions. The another negative outcome of extensive irrigation is the salinisation of soil,[2] which caused decrease in agricultural production per hectare.

Intensive cultivation of cotton also exhausted the soil. In early period, agriculture was done on the basis of crop rotation but Soviet demand for cotton forced Central Asia to turn into Cotton Monoculture region. Hence cotton's share of sown acreage reached 85 percent which normally should be

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[1] N.F. Glazoviskiy, Ideas of an escape from the "Aral Sea Crisis", Soviet Geography, vol. XXXII, No.2, Feb 1991, p.74.

[2] Ibid.

between 50 to 60 percent.[3] Continuous plantation with the same crops demands more mineral fertilizer. So the use of mineral fertilizer in Central Asia increased massively. David. R. Smith writes that in 1979 in Uzbekistan 116 kg/hec of fertilizer was needed to maintain the present level of productivity.[4] A leading academician rightly compared the soil of Uzbekistan with a gravely ill person.[5]

With the increasing use of fertilizers, the use of pesticides also increased as cotton has low immunity to disease and infestation. Use of pesticides and fertilizer increased in the region not only due to cotton cultivation but it was also used in grain field increasingly. The amount of chemicals used in Central Asian agriculture can be imagine by the fact that, in 1980 in Uzbekistan 30 kilograms of chemicals were applied to every hectares of sown land while only 1.3 kg per hectare was used in USSR as a whole.

These policies of Soviets affected the environment adversely and it caused health problem of peoples. The infant mortality rate increased in Central Asia,[6] and the percentage of population having respiratory problem infections and having digestive problems increased.

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[3] Boris Rumer, "Central Asia's Cotton: The Picture Now", Central Asian Survey, vol.6, no.4, 1987, p.84

[4] David R. Smith, "Growing Pollution and Health Concerns in the Lower Amu Dar'ya Bains, Uzbekistan", Soviet Geography, vol.XXXII, No.8, Oct. 1991, p.556.

[5] Boris Rumer, op.cit., p.84.

[6] David R. Smith, op.cit., p.562.

Undoubtedly, the Soviet agricultural policy had dual impact in Central Asia where, on the one hand some positive consequences such as abolition of feudalism and land-lordism, modernization of agriculture, increase in agricultural and per acreage productivity can be counted; on the other hand, there is some negative impact, too. Actually the contradiction and bad consequences came in view immediately after a short period. In the process of modernization of agriculture, excess use of fertilizers and chemicals had the negative results on the productivity which in whole affected Central Asian environment. Apart from this, due to over-emphasis by Soviet government on the production of cash crops (cotton) in Central Asia, there was shortage of food grains and consequently Central Asia was forced to import food grains. Moreover, in the process of collectivization, Soviet policy to make Central Asian nomads hand over their livestocks to collective farms had negative impact because people started to slaughter livestock instead of surrendering them, thus, for a period, there was an acute shortage of livestocks. Nevertheless the actual impact of Soviet policy whether positive or negative can be seen after Soviet disintegration till now.

BIBLIOGRAPHY

BOOKS

Allworth, Central Asia: A Century of Russian rule, Columbia University Press, NewYork and London 1967.

Berkhin, I, Soviet Economic Policy: Early yers, Novosti Press, Moscow, 1970.

Caroe, Olaf, Soviet Empire- The turks of Central Asia and Stalinism, St. Martin's Press, NewYork 1967.

Central Statistical Board of the USSR Council of Ministers, National Economy of the USSR, Foreign language publishing house, Moscow, 1957.

Clarke, Roger, A and Dubravko, J.I. Matko, Soviet Economic Facts (1917-81), Macmillan Press, London,1983.

Coats, Zelda and W.P. Soviets in Central Asia, Lawrence and Wishart Ltd London, 1951.

Danilov, V. and Y. Luanov, Road of progress, Novosti press agency publishing house, Moscow, 1975.

Dienes, Leslie, Soviet Asia: Economic development and National Policy choices, Westview Press, Boulder, 1987.

Dobb, Maurice, Soviet Economic development Since 1917 Routledge and Kegan Paul, London, 1948.

Dyker, David A, Soviet Economy, Crosby, Lockwood, Staples, London, 1976.

Ghai, Dharam and Azizur Rahman Khan, Collective agriculture and rural development in Soviet Central Asia, The Macmillan Press London 1979.

Gidadhubli R.G.(ed) Socio-Economic transformation of Soviet Central Asia, Patriot Publishers, New Delhi 1987.

_____, Soviet agriculture: Development and issues, Patriot Publishers, New Delhi, 1988.

Hambly, Gavin, Central Asia, Weidenfed and Nicolson Ltd and Dell Publishing Company, London, 1969.

Hanna, George H., Outline History of the USSR, Foreign languages publishing House, Moscow, 1960.

Hedlund, Stefan, Crisis in Soviet agriculture, Croom Helm & St. Martins publication, NewYork, 1984.

Holdsworth, Mary, Turkestan in the Ninteenth Century, St. Antony's College Soviet Affairs, London, 1956.

Imam, Zafar (Ed), Restructuring Soviet Society, Panchsheel Publishers, New Delhi, 1984.

Jasny, Naum, The Socialized Agriculture of the USSR, Stanford, 1967.

Johnson, Gale and Brooks, Prospects for Soviet Agriculture in the 1980's, Indiana University Press, Broomington, 1983.

Kaplan, Synthia.S, The Party and agricultural Crisis Managment in the USSR, Cornell University Press, London, (1987).

Katkoff, Vladmir, Soviet Economy 1940-1965, Dangary Publishing Co., Baltimore, 1961.

Kaushik, Devendra, Socialsim in Central Asia, Allied Publishers, New Delhi, 1976.

_____, Central Asia in Modern Times, progress publishers, Moscow, 1970.

Lane, David, Soviet Economy and Society, NewYork University Press, NewYork, 1985.

Mc Auley, Mary, Politics and the Soviet Union, Hazell Watson and Viney Ltd., Great Britain, 1977.

McCaulley, M. (ed), Khrushchev and Khrushchevism, Mcmillan Press, London, 1987.

_____, Khrushchev and the Development of Soviet agriculture, Macmillan press, London, 1976.

Medvedev, R.A. and Medvedev Z.A., Khrushchev: The year in power, Columbia University Press, NewYork, 1976.

Medvedev, Zhores.A, Soviet Agriculture, W.W. Norton and Company New York, 1987.

Mehta, Vinod, Soviet Economic Development and Structure, Sterling Publishers, New Delhi, 1978.

_____, Soviet Economic Policy: Income Differentials in USSR, Radiant Publishers, New Delhi, 1997.

Modak, A.G, Economic development of the USSR, Himalya Publishing house, Bombay, 1982.

Morozov. V, Soviet Agriculture, Progress publishers, Moscow, 1977.

Murarka, Dev, The Soviet Union, Thames and Hudson, London, 1971.

Narodnoe Khoziaistva, SSSR 1988, Financi E Statistika, Moscoba, 1984.

_____, SSSR, 1988, Financi E Statistika, Moscoba, 1989.

Nove, Alec, and Newth, J.A., The Soviet Middle East: A Model for Development, George Allent Unwin Ltd., London, 1967.

Nove, Alec, Economic History of USSR, Allen Lane the Penguin Press, London, 1969.

_____, The Soviet Economic System, Allen and Unwin, Inc., London, 1980.

Pierce, R.A., Russian Central Asia, 1867-1917, Barkely, 1960.

Rumer, Boris, Z, Soviet Central Asia: "A Tragic Experiment, Unwin Hyman, London, 1989.

Rybkin.Y, The Soviet Land's Cotton Belt, Novosti Press Agency Publishing House, Moscow, 1979.

Sane, G.D, Soviet Agriculture: Trials and Triumphs, Popular Prakashan, Bombay, 1976.

Sansanwal, M.S., Political Leadership in Soviet Central Asia 1946-64, Commonwealth, New Delhi 1988.

Schwartz, Harry, The Soviet Economy Since Stalin, Victor Gollanez Ltd, London, 1965.

Selunskaya. V and Tetyushev. V, How Collective Farming was Established in the USSR: Facts and Fietion, Novosti Press Agency Publishing House, Moscow, 1982.

Shaffer, Harry G, The Soviet Economy: A Collection of Western and Soviet View, Methuen & Co.Ltd, London, 1964.

Sharma, R.R., A Maxist Model of Social Change in Soviet Central Asia: 1917-1940, MacMillan Co. of Inida Ltd., New Delhi, 1979.

Shmelev, G., Personal Subsidiary Farming Under Socialism, Progress Publishers, Moscow, 1986.

Singh, V.B., Soviet Economic Development and Rising Living Standards, Sterling New Delhi, 1977.

Strahler, Arther. N., Physical Geography, John Wiley & Sons inc, NewYork, 1960.

Tulepbayev, B, Socialist Agrarian Reforms in Central Asia and Kazakhstain, Nauka Publishers, Moscow, 1986.

Vaidyanath, R, The Formation of Soviet Central Asian Republics, Peoples Publishing House, New Delhi, 1967.

Warikoo, K. and D. Norbu (ed.), Ethnicity and Politics in Central Asia, New Delhi, 1992.

_____, Central Asia and Kashmir, Gian Publishing House, Delhi, 1989.

Wheeler, Geoffery, The Modern History of Soviet Central Asia, Weidenfeid and Nicolson, London, 1964.

Wilber, K, Charlece, The Soviet Model and Underdeveloped Countries, The University of North California Press, 1969.

Williams.J, The Soviet Peasantry: An Outline History 1917-1970, Progress Publishers, Moscow, 1975.

ARTICLES :

Antel, John and Gergory Paul, "Agriculture surplus models and peasant behaviour: Soviet agriculture in 1920's", Economic Development and Cultural Changes vol.42, no.2, Jan 94, 375-86.

Bechulik, A.I., "Economic reforms in Central Asian Republics", Contemporary Central Asia, vol.11, no.3, Dec 98, 1-26.

Bott, Lydia, "Recent trends in the Economy of Soviet Central Asia", Central Asian Review, no.3, 1965.

Curley, Patriciam, M, "The price of the plan perception of Cotton and health in Uzbekistan and Turkmenistan", Central Asian Survey, No.4, 1989. pp.1-38.

Dienes, Leslie, "Regional Planning and the development of Soviet Asia", Soviet Geography, vol.28, no.5, May 87, pp.287-324.

Feygin, L.Y., "Problems of improving inter regional production relation of the Central Asian Economic region", Soviet Geography, vol.V, no.6, June 1964.

Forgus, Michael, "Aral Sea environmental crisis, problem and a way forward", Asian Affairs, vol.10, no.1, Feb 99, pp.35-44.

Glazovskiy, N.F., "Ideas on escape from the "Aral Sea Crisis", Soviet Geography, vol.32, no.2, Feb 1991.

Herbert, Dietor, "Regional intergration in Central Asia: Current Economic Position and Prospect" Central Asian Survey, vol.15, Dec 1996, pp.369-380.

"Irrigation and Water Supplies in Kazakhstan- Projects and Problems", Central Asian Review, vol.XII, 1964, pp. 198-209.

"Irrigation in Central Asia (part-I & II)", Central Asian Review, vol.VIII, 1960, pp. 44-50 and 138-149.

"Irrigation: Progress Since 1960", Central Asia Survey, vol.IX, 1982, pp.138-154.

Khan. Abdul. Qadir, "Central Asia under the Soviets", Journal of the Royal Central Asian Society, vol.17, part.III July 1930, pp.285-90.

Kochin, Michel. S, "Decollectivization of Agriculture and the planned economy", American Journal of Political Science, vol.40, no.3, Aug 96, pp.717-39.

Larman Zvi and others "Land and Water Policies in Uzbekistan", Post Soviet Geography and Economic, vol.37, no.3, 1996, pp.145-74.

Lerman and others, "Self sustainability of subsidiary household plots; Lesson for privatization of agriculture in former socialist countries", Post Soviet Geography, vol.35, no.9, Nov. 1994.

Lipovsky, Igore, "Deterioration of the ecological situation in Central Asia, causes and possible consequences" Europe Asia Studies, vol.47, no.7, Nov. 95, pp.1109-24.

_____, "The Central Asian Cotton epic", Central Asian Survey, vol.14, no.4, 1995, pp.529-542.

Mass, G. and Altman, Y., "Cultural bases of Soviet Central Asia's second Economy, Uzbek and Tajik", Central Asian Survey, vol.5 no.3/4, 1986, pp.195-204.

Massino, Livi-Bacci, "On the human costs of collectivization in the Soviet Union", Population and Development Review, vol.19, no.4, Dec 93, pp.743-66.

Miller, Margaret, "Notes on Agricultural developments", Central Asian Review, vol.XVI, 1968.

O'Hara, Sarah. L., "Agriculture and Land Reform in Turkmenistan Since Independence", Post Soviet Geography and Economics, vol 38, no. 1, 1997, pp.430-444.

O'Hara, Sorah, L. and Hannan Tim, "Irrigation and Water management in Turkestan; Past system, present problem and future scenario" Europe Asia Studies vol.51, no.1, Jan 99, pp.21-41.

Patnaik, Ajay, "Agriculture and Rural out-migration in Central Asia, 1960-61", Europe-Asia Studies, vol.47, no.1, 1995, pp.147-169.

Paul B. Henze, "The economic development of Soviet Central Asia to the eve of World War II", Journal of Royal Central Asian Society Journal, Part I vo.XXXVI, July 1949.

Pockney B.P, "Agriculture in new Russian Federation", Journal of Agricultural Economics, vol.45, no.3, Sept 94.

Probst, A. Ye, "Further productive specialization of Central Asian Region", Soviet Geography, June 1964, pp.11-19.

"Private Property Tendencies in Central Asia and Kazakhstan", Central Asian Review, vol. X, no.2, 1962, pp.147-56.

Rumer, Boris, "Central Asia's Cotton: The picture now", Central Asian Survey, vol.6, no.4, pp.75-88, 1987.

Sharma, R.R., "Class and Social Agrarian transformation in Soviet Central Asia; A historical cultural context", Man and Development, vol.8, no.3, Sept. 1986, pp.112-27.

_____, "Social parameters of the agrarian transformation of Soviet Central Asia; the historicocultural context", International Studies, vol.24, no.2, April June 1987, pp.113-31.

Smith, David. R., "Growing pollution and health concerns in the lower Amu Darya basin, Uzbekistan", Soviet Geography, vol. 32, no.8, Oct 1991, pp.553-563.

Spoor, Max, "Aral Sea Basin Crisis: Transition and environment in former Soviet Central Asia" Development and Change, vol.29, no.3, July 98, 409-35.

Tchokaiff, M.A, "Fifteen years of Bolshevik rule in Turkestan", Journal of the Royal Central Asian Society, Vol. XX part III, July 1933, pp.351-359.

"The Aral and Amu-Darya Flotillas", Soviet Geography, vol.VII, 1981, pp.365-371.

"The Collectivisation Campain in Uzbekistan", Central Asian Review, vol.12, no.1, pp.40-52, 1964.

Ul Masov, A. and Sharifkhozhaev, M, "Formation and development of the Socialist Economy in the Central Asian Republics", Problems of Economics vol.28, no.6, Oct. 1985, pp.74-86.

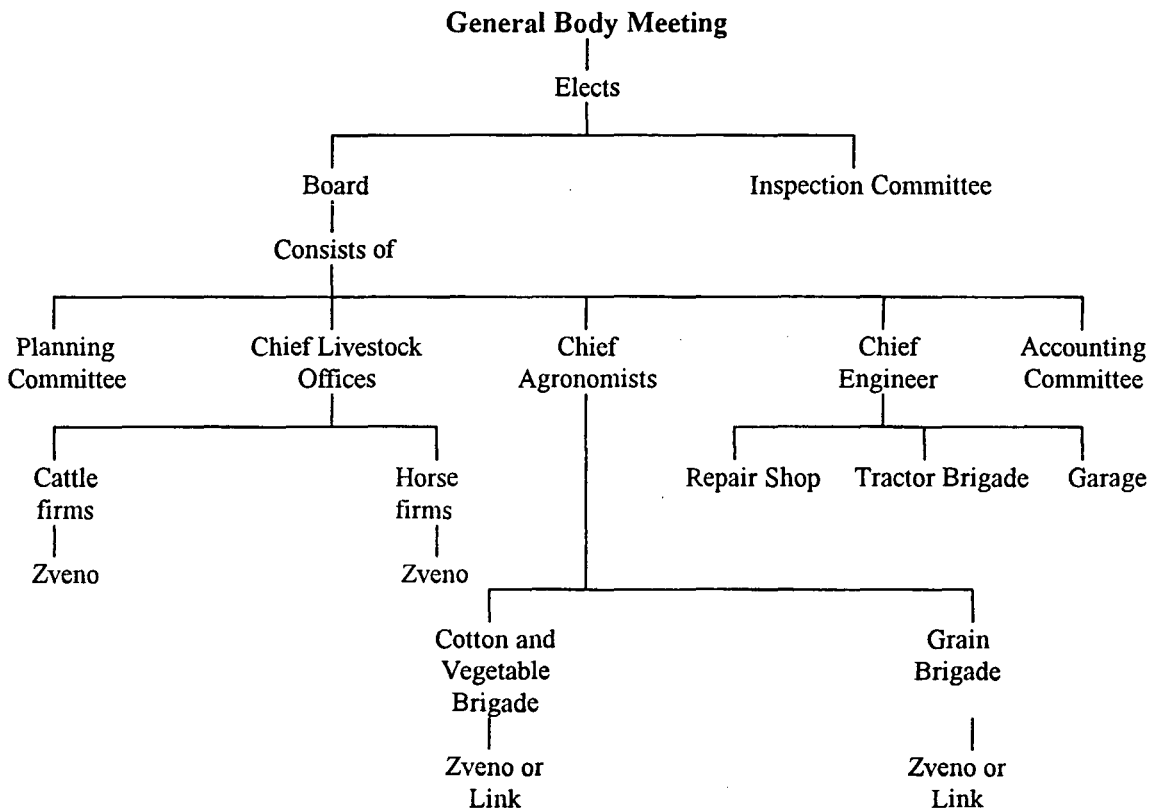
Wemer, Cynthia Ann, "A preliminary assessment of attitudes towards the privatization of agriculture in contemporary Kazakhstan", Central Asian Survey, vol.13, no.2, 1994, pp.295-303.

Williams. D.S.M., "Taxation in Tsarist Central Asia", Central Asian Review, vol.XVI, no.1, 1968, pp.51-63.

Zoerb, Carl. R, "Soviet Cotton Production - Plans and Prospects", Journal of the Royal Central Asian Society, vol.XLIV, part III & IV, July-October 1957, pp.226-230.

APPENDIX

Structure of the *Kolkhoz* Organisation



Average Procurement Prices: (rubles per ton)

All USSR

	1952	*1953*	*1955*	*1956*	*1958*	*1960*	*1962*	*1964*	*1965*	*1966*	*1967*	*1970*	*1975*	*1976*
Grain	8.67	20.5	47.9	55.0	60.3	62.2	72.3	72.3	89.7	98.2	103	97.2	111.8	96.0
Raw Cotton	318.3	334.2	362.9	366.0	337.4	343.8	343.8	394.7	442.4	442.4	452.0	555.0	583.6	583.0
Meat	88.6	341.1	518.3	589.2	1041.1	1104.0	1353.8	1437.1	1589.7	1853.5	1873.6 *	2278.0	2385.1	2441.4
Milk	29.1	58.8	88.2	97.2	117.6	117.6	126.9	133.0	148.5	153.9	156.0	191.9	215.1	217.0
							Uzbekistan							
Grain	–	–	–	–	–	–	–	–	157.8	–	–	157.0	172.2	150.6
Raw Cotton	–	–	–	–	–	–	–	–	435.6	–	–	539.8	544.0	561.6
							Tajikistan							
													1972	*1973*
Grain	–	–	–	–	–	63.5	–	–	99.5	–	–	144.4	126.5	148.8
Raw Cotton	–	–	–	–	–	378.6	–	–	490.7	–	–	613.0	586.9	614.8

Finance for Collective Farm in the USSR
(Billion Roubles)

	1965	1970	1975	1980
Investment	4.4	6.6	9.2	10.3
New Loans	1.4	2.2	3.3	4.7
Short Term Credit	0.3	2.4	10.1	25.7
Long Term Credit	3.9	10.3	17.8	34.0

Source: Narkhoz (1981), pp.341, 528, 531. Cited in Hedlund Stefan, Crisis in Soviet Agriculture, p.101.

Production Cost and Procurement Price of Collective Farm in the USSR
(in Rouble per ton)

	1964-66	1969-71	1974-76	1978-80
Production Cost				
Grain	46	52	62	71
Cotton	313	404	427	475
Sugarbeets	20	23	27	31
Meat	1085	1200	1495	1908
Milk	155	178	217	267
Egg (per 1000)	78	73	74	84
Procurement Price				
Grain	90	97	103	103
Cotton	442	555	583	
Sugarbeets	28	28	34	
Meat	994	1467	1512	
Milk	148	192	212	277
Egg (per 1000)	79	90	92	

Source: Johnson, D. Gale and Brooks, Karen McConnell, Prospects for Soviet Agriculture in the 1980s, (Bloomington: Indiana University Press, 1983), p.48.

Contribution of Private Plot Farming to the Production of Basic Agricultural Good in the USSR (Percent)

	1940	1950	1960	1965	1970	1975	1980	1984
Grain	12	7	2	2	1	1	1	
Sunflower	11	4	4	2	2	3	2	3
Potatoes	65	73	63	63	65	59	64	58
Other Vegetable	48	44	44	41	38	34	33	30
Meat	72	67	41	40	35	31	31	28
Milk	77	75	47	39	36	31	30	29
Eggs	94	89	80	67	53	39	32	29
Wool	39	21	22	21	20	20	20	24

Source: G. Shmelev, Personal subsidiary farming under socialism, (Moscow: Progress Publishers, 1986), p.59.

Total Number of Cows (In Million Heads)

	1941	1971	1976	1981	1982	1983
USSR	280	398	419	434	437	438
Uzbekistan	06	11	12	14	14	15
Kazakhstan	13	25	26	30	31	31
Kirghizia	02	04	04	04	04	04
Tajikistan	02	04	04	04	05	05
Turkmenistan	01	02	02	02	02	02

Source: Narodnoe, Khozaistva, SSSR, 1983, Financi E Statistics, Moscaba, 1984, p.259.

Total Number of Sheep, Goat and Pigs in all Economies
(in Million Heads)

	Sheep and Goats			Pigs		
	1941	**1981**	**1982**	**1941**	**1981**	**1982**
USSR	917	1485	1485	276	734	733
Uzbekistan	58	90	94	01	05	06
Kazakhstan	82	352	357	05	31	29
Kirghizia	25	100	103	01	03	03
Tajikistan	22	29	31	02	01	02
Turkmenistan	26	45	45	04	02	02

Source: Narodnoe, Khoziaistva, SSR, 1983, p.260.

Production of Meat
(In thousand metric tons)

		Average per year				
	1940	**1971-75**	**1976-80**	**1981**	**1982**	**1983**
USSR	4695	14004	14840	15200	15370	16450
Uzbekistan	82	240	293	354	378	389
Kazakhstan	226	987	1009	1168	1103	1177
Kirghizia	41	145	152	163	166	170
Tajikistan	30	75	90	98	99	102
Turkmenistan	22	64	76	81	82	87
Total in Central Asia	401	1511	1620	1864	1828	1925

Source: Narodnoe, Khozaistva, SSSR, 1983, p.263.