CENTRAL ASIAN REVIEW

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The area covered in this Review embraces the five S.S.R. of Uzbekistan, Tadzhikistan, Kirgizia, Turkmenistan and Kazakhstan. According to Soviet classification "Central Asia" (Srednyaya Aziya) comprises only the first four of these, Kazakhstan being regarded as a separate area.

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INTRODUCTION

The object of the Central Asian Review is to present a coherent picture of current political, social and material developments in the five Soviet Socialist Republics of Uzbekistan, Tadzhikistan, Kirgizia, Turkmenistan and Kazakhstan as they are reflected in Soviet publications. The selection of material has been made as objective as possible; and an attempt has been made to report positive achievements and shortcomings in the same proportion and with the same degree of emphasis as they are presented by the Soviet Press and official publications.

The Review is divided into six sections, one for each Republic and one containing articles of a more general scope. Each of the five sections dealing with the Republics contains material arranged under one or more of the following headings: Agriculture, Industry, Communications, Public Works and Political and Cultural Affairs. Subjects are only treated when a sufficient amount of significant material is available. Thus, although each issue is broadly speaking concerned with the quarter under review, material relating to previous quarters will also be included.

In the spelling of place-names the system of transcribing from Russian used in Phillips Record Atlas (1952 Edition) is followed throughout.

THE TURKIC PEOPLES OF THE U.S.S.R.: THE DEVELOPMENT OF THEIR LANGUAGES AND WRITING

A recent issue of "Voprosy Yazykoznaniya", a review devoted to linguistic matters, contained an article by A.N. Baskakov, the well-known Soviet turcologist, entitled "The Development of the Languages and Writing of the Peoples of the U.S.S.R. (Turkic Languages)".

This article, amounting to about 15,000 words, discusses in great detail the pre- and post-revolutionary history of the Turkic languages used in the U.S.S.R., and their development, particularly in the light of Stalin's pronouncement on languages delivered in June, 1950. The final section deals with lines of future development and problems which still require study and solution.

The following brief résumé merely aims at presenting the chief features of an article too long to be given here in full. Such a résumé must inevitably fall short of reflecting the reasoning and atmosphere peculiar to Russian and Communist treatment of subjects of this kind. These aspects cannot, indeed, be briefly and directly conveyed in terms readily comprehensible to Western readers and could only be fully appreciated in the light of a careful study of the whole article.

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Before the Revolution

The Turkic peoples which formed part of the former Russian Empire are divided by the author into three groups: peoples which were already formed into bourgeois nations, such as the Uzbeks and Kazakhs who already had their own developed national languages; peoples which had not yet reached the stage of national development, although they had their own writing and literary language: and a third group which consisted either of recently formed national entities which had not yet acquired a written language, or of tribal groups not yet formed into such entities and possessing only tribal languages and dialects.

In spite of great differences in their linguistic development, all these peoples can be said to have passed through two periods of evol-

ution: i) The period during which most of the peoples were formed into independent communities with a universal language, i.e. 14th - 19th centuries, and ii) The period during which nations and a whole series of national languages came into being, i.e. from the second half of the 19th century up to 1917. The first period saw the formation of most of the modern Turkic communities such as Uzbeks, Kazakhs, Kirgiz, Turkmen and Kara-Kalpaks. There was an intensive development of the oral tradition and the heroic epos and there also appeared a rift between the popular spoken language and the literary written languages where they existed. The second period saw the appearance of literary languages as a higher form of popular language and the beginning of national languages. The latter were distinguished from the community languages by their much greater scope and wider social functions which resulted from their use in literature. During this period there began a struggle between the reactionary ruling class which tried to retain the old written languages filled with Arabic and Persian, and the progressive democratic section of the people which strove to blend the literary and popular tongues, to remove the Arabic, Persian and Turkish vocabulary and to approach closer to the Russian language. This latter section was opposed to the Pan-Turanian and Pan-Islamic movements.

The third group of the peoples mentioned by the author consisted of much more primitive tribal groups such as the Altais and the Khakass. These tribal groups were not formed into communities and had no common language but rather a number of tribal tongues and dialects, distinguished by peculiarities of vocabulary and grammatical construction, although they were all of common origin. These tribal languages had no written form apart from a few religious books printed in a character evolved by missionaries.

The Post-Revolutionary Period

The freeing of the Turkic peoples by the Revolution and the vast upheavals which it caused in their economic, political and cultural existence were accompanied by a remarkable development of their languages. Although several new literary languages have been created and also written characters for languages which did not possess them the author emphasises that there was no question of the formation of new languages with a new basic word-stock and a new grammatical structure. The process is rather one of the completion of existing languages and of transforming tribal and community languages into national languages with a rich terminology and vocabulary. By this means, national literatures, theatres and presses are being created.

Baskakov divides the post-revolutionary period of development into two phases: i) The period of the formational of national autonomous units

with their own national languages, i.e. from the beginning of the October Revolution in 1917 up to the emergence of the socialist structure in 1928, and ii) the period of fully developed Socialism and the growth among the peoples of the U.S.S.R. of a culture national in form and socialist in content, i.e. 1928 until the present time. Although the Lenin-Stalin nationalities policy and the formation of national republics created favourable conditions for the development of national literary languages, existing languages underwent no change in their basic structure, this being marked by an exceptional stability of the kind which Stalin has described as inherent in the Russian language. The Turkic languages, being less developed than Russian, underwent more change, but their essential basis has never been touched. The main changes were related to a) the increase in the importance of literary languages as the basic languages of the national republics, the development of writing, the perfecting of scripts and the cementing of the new relationship which had grown up between the popular and literary languages on the one hand and among territorial dialects in any given language on the other; b) the remarkable growth of vocabulary; and c) certain phenomena in the development of phonetic and grammatical structure. All these changes have to be subjected to close and detailed study according to the peculiarities of each established language, to their social history and to the whole apparatus of social and economic relations peculiar to this or that period.

Apart from the more considerable peoples which had been enslaved in the former Russian Empire the nationalities policy has also aided the development of national consciousness, and consequently of language, among the smaller tribes and communities which, under capitalist conditions, were condemned to extinction. As the Soviet state developed, such ethnic groups as the Khakass and Altais were formed into independent autonomous districts. As a result of the recent unification of the Khakass into a single community, the modern Khakass language has become a combination of several dialects which correspond to the tribal groups of which the community is composed and relate historically to the tribal languages. These dialects are now gradually finding a common level and are merging with the literary language. Similar processes of the consolidation of separate tribes into a single community, and later into a socialist nation, and of the formation of a single popular language, have taken place elsewhere, for example, in the Gorno-Altai and Tuva Autonomous Districts. In each case it has been necessary to determine which dialect reflects most fully the regular features of the language as a whole.

Reactionary Opposition

In the early states of post-revolutionary development the principle of basing literary language on the most representative dialects met with considerable reactionary opposition. In Uzbekistan, for example,

there was a tendency to divert the Uzbek language from the general trend of development being followed by the languages of socialist nations by trying to create an artificial literary language based on the old book language. The aim of these reactionary elements was to achieve an inter-dialectical mixture by artificially combining the peculiarities of grammatical structure and vocabulary of all the Uzbek dialects. At the same time, they tried to prevent any considerable introduction of Russian and international words and expressions. These were eliminated and replaced in some languages by Arabic and Persian words unfamiliar to the broad masses, and in others by artificially fabricated "national", but equally unfamiliar and unintelligible, words and expressions. The question of script was also the subject of a violent controversy. The bourgeois nationalists made a determined stand for the old Arabic alphabet which was completely unsuited to Turkic languages. Defeated in this object, they attempted to "reform" the Arabic alphabet with the idea of retaining it by such half-measures. But the new demands resulting from the expansion of economy and culture quickly ousted both the Arabic character and its reformed variants, and all the Turkic languages went over first to the Latin and later to the Russian written character.

Changes in Vocabulary

Baskakov deals in great detail with the whole question of vocabulary which he describes as the element in languages most susceptible to change. Language is not part of the "superstructure" and there is therefore no question of the replacement of old vocabularies, but of the construction of new ones. The change consists in the existing vocabularies being supplemented by new words arising out of changes in social structure, in the development of production, culture, science and the like. The most extensive and productive source from which established languages can enrich their vocabularies is their basic word-stock and their basic roots. An ancillary but none the less important source is the vocabulary of the Russian language. The methods by which new conceptions can be expressed by means of native resources include the following:-

a) Loan translation,

b) The extension or limitation of the meaning of existing words,

c) Word combination and word composition,

d) Derivatives,

e) Abbreviations.

These methods are illustrated by a large number of examples taken from

various Turkic languages such as Uzbek, Kara-Kalpak and Kazakh.

Before embarking on a detailed examination of the whole question of the Russian language used as a source of loanwords to supplement existing vocabularies, Baskakov touches on the subject of Arabic and Persian loanwords. Such words, introduced by bourgeois nationalists in order to express new ideas, are now rapidly being replaced by Russian and international terms. This, however, should not be taken to apply to the many Arabic and Persian words which have passed not only into the vocabulary, but also into the basic word-stock of Turkic languages, and are now effectively used side-by-side with native words. These words relate principally to conceptions connected with religion and science, but they also make up a certain part of the social, political and other vocabulary.

Word-borrowing

The influence of the Russian language on the development of the languages of the peoples of the U.S.S.R. began before the Revolution. At that time, however, Russian loanwords related principally to the vocabulary of everyday life or to the terminology of agriculture, administration and, to a certain extent, culture. Since the Revolution, the number of loanwords has enormously increased and now includes a vast range of political, economic, scientific, technical and cultural terms, which form a lexical stock, which is common to all the languages of the Soviet Union since it derives from the same conditions of social development in the post-revolutionary period. These words are entering into the system of languages on a uniform basis and are subject to word-formation and word-change in the same way as indigenous words, that is to say, they conform to the languages' internal laws of development. Thus, although most of the loanwords are nouns, or more rarely, adjectives, they can be made to do duty as other parts of speech by the use of native suffixes and auxiliaries.

Effect of Word-borrowing on Phonetics

Before the Revolution, loanwords taken into the Turkic languages tended to conform to the pronunciation and phonetics of the language which borrowed them. This tendency continued for a few years after the Revolution, but more recently, the orthography of Russian loanwords has begun to conform to that of Russian. This is due to certain subsequent developments: the scale of borrowing of Russian loanwords has greatly increased; among people who were formerly illiterate the tradition of writing has become established; apart from the appearance of a great number of new words and terms in the national languages, new phonemes have also crept in; finally, the importance of Russian as "a second native language" has grown. The adoption of Russian spelling in Russian loanwords is bringing

about a gradual change in the phonetic rules inherent in modern Turkic languages. Languages which have preserved the system of consistent vowel harmony are losing it in the loanwords.

Improvement of Grammatical Structure

Apart from changes in vocabulary and phonetics there is also a noticeable improvement in the grammatical structure of the Turkic languages. This improvement includes such phenomena as the development and complete separation as an independent part of speech of the adjective which, until recently, was only vaguely distinguished on the one hand from the adverb and on the other from substantive; there has been an advance in the construction of compound tenses; and the order of words in sentences has been changed, particularly in the spoken language.

End of Marr's "New Doctrine"

In beginning his final section on the necessity for further research, Baskakov refers briefly to Marr's "new doctrine" which he describes as having "gravely prejudiced the study of national languages and of the questions relating to the theory and practice of linguistics". Stalin's pronouncements have made it possible to put an end to the confusion previously reigning in this field of knowledge and to organise future work on Marxist lines. He has shown, for instance, that the relationships existing between nations and languages before and after the victory of Socialism are quite different. Under capitalist conditions, where cross-breeding of languages takes place, there may be conflict for the supremacy of one or another language, but in the U.S.S.R., after the victory of Socialism, languages have developed in perfect freedom. In the new socialist regime, the attitude of all the peoples of the U.S.S.R. has changed towards Russian which is now recognised by all of them as "a second native language". As one of the most advanced languages in the world it has become the principal (non-native) source of the enrichment and development of the other languages of the Soviet Union.

Subjects for Future Research

Although there has been much planned research relating to the development of Turkic languages, there is still much to be done and certain mistakes have been made. Work on dialects has not always been on the right lines, particularly in the matter of the establishment of the correct dialectical basis. For example, the modern literary Uzbek language, the basis of which is formed by the so-called "urban dialects lacking vowel harmony", is to a certain extent isolated from some of the dialects of the popular language. Again, some Kazakh philologists have wrongly based

their studies on the old division of the Kazakh people into three "hordes", although the facts of the Kazakh language do not bear out such a schematic division of the dialects into horde dialects.

In establishing the standard of usage of a literary language no great cleavage should be allowed to exist between the literary and spoken languages. The borrowing of new words should be avoided where they could be expressed by the native resources of the language. At the same time however, a national language should not be hedged round with artificial barriers which prevent the introduction into the literary language of Russian words widely used in the popular spoken language. Russian occupies a special position as a unifying factor among the peoples of the U.S.S.R. and strong resistance should be put up against bourgeois and nationalist tendencies to avoid borrowing from neighbouring and more highly developed languages, such as Russian, to avoid, in fact, drawing closer to the Russian language. A rational compromise must be struck between the use of native sources and of Russian sources of new vocabulary.

Modification of Alphabets and Orthography

Some important modifications are necessary in the Russian alphabets adopted by most of the languages of the U.S.S.R. The use of the Russian script in Turkic languages had not only contributed to their development, but has been of great assistance in the teaching of the Russian language and in the assimilation of Russian culture. It has provided a uniform basis from which literacy can be achieved simultaneously both in the native languages and in Russian. But the existing Russian-based alphabets require certain changes to make them more precise and more simple. Baskakov then points out a number of inconsistencies and redundancies in the present alphabets.[1] Among these he includes the existing practice of representing certain sounds common to many languages by a different symbol in each.

In dealing with the orthography of Russian loanwords, Baskakov points out that it is not possible to establish general and universal rules for all languages for the spelling of these words. Broadly speaking the principle should be followed of leaving old Russian loanwords in the forms complying with the phonetics and pronunciation of the language, while new words should be written in the Russian orthography. The abolition of established tradition in the writing of loanwords would result in a breakaway from the existing orthography, and would lead to a divergence between the languages of the peoples of the U.S.S.R. and the existing spoken popular languages. At the same time there exists another danger - the divergence of the languages of the peoples of the U.S.S.R. from Russian. This would happen if the national orthographies were worked out without taking into account the fact that new sounds as well

as new words have been borrowed from the Russian language. Such a divergence would prejudice the learning of Russian in non-Russian schools.

In conclusion, Baskakov affirms that the solution of all these problems has been made possible by the guidance and methodological precepts laid down by Stalin.

The Main Turkmen Canal

The All-Union project known as the "Main Turkmen Canal" has been the subject of a number of popular and technical books published in the Soviet Union during the past few years. Details of the popular literature are given in the Bulletin of the Academy of Sciences of the U.S.S.R., Geographical Series No. 3, 1952. Two books of a semi-technical kind were published by the Committee for the Construction of Hydro-Electric Stations, Canals and Irrigation Systems during 1952. The most recent popular book appears to be "The Soviet People transform the Desert into a Land of Plenty" by Academician Nalivkin (1953). Articles on various aspects of the project frequently appear in the technical and popular reviews.

The aim of the present article is to describe the current progress on the canal project insofar as it has been reported during the first quarter of 1953 in the press of the two Republics immediately concerned, namely Turkmenistan and Uzbekistan.

The Main Turkmen Canal is now seen as a very considerable project which embraces not only the construction of the canal itself, but a number of allied enterprises. These include the irrigation of adjacent areas, the creation of belts of afforestation, the construction of electric power-stations, some of which are merely temporary and others which are designed to be permanent, and the construction of a road-system following the alignment of the canal. Apart from the building of various installations at the headworks of the canal at Takhia-Tash and New Kazandzhik, the project has involved the creation of new settlements and accommodation to house the workers on the canal.

A number of All-Union, Central Asian and Republican organisations are concerned in the various aspects of the project. Among those mentioned in the press during the period under review are the following:

a) Gidroproekt responsible for planning and scientific survey and research.

b) Sredazgidrostroi, the executive body apparently responsible for the constructional work.

c) Soyuzdorproekt responsible for road building.

d) Turkmenvodstroi concerned with placing new land under irrigation.

e) Agrolesproekt responsible for afforestation

f) Ashkhabadproekt specifically mentioned as having designed the new settlement at Tashauz.

Progress has evidently been considerable and the opening of the Takhia-Tash feeder canal on 1st March, 1953, marks a new phase in the completion of the project. Nevertheless, criticisms of the conduct of various aspects of the project are numerous.

Official Pronouncements

During February, there was a conference of the "Aktiv" of the Canal workers at which 250 delegates were present, including representatives of scientific units operating in the desert. The report on 1952 achievements and on 1953 prospects was read by Eristov, the deputy manager of the Sredazgidrostroi. He announced the achievement of considerable progress in the carrying out of the Canal project. Planned targets of construction and the installation of equipment had been exceeded two-fold. During 1952, over 3 million cubic metres of earth had been excavated 36 thousand square metres of housing handed over to occupiers, and 60 kilometres of motor-roads and 18 kilometres of railway lines and electric transmission lines had been laid. He nevertheless admitted that building costs remained high and that economies planned had not been fully realised. The cost of works construction had only been cut by one per cent instead of an anticipated 9.8 %, and in the construction of houses at Khodzheili and Sultan Uiz Dag costs had even mounted. At times valuable equipment and machinery remained idle as for one reason or another they could not be effectively used. There were some cases of fraudulent conversion of money overpaid for work done, and of exaggerated figures submitted in reports on the extent of operations. In spite of this, progress was being made with the main tasks and the advance into the desert and its reclamation was being continued. Included in the plan for 1953 were a thermal electric-power-station at Takhia-Tash, a suspension cable-way connecting the two banks of the river, a concrete plant and many houses and municipal buildings. Among lesser improvements planned were the better supply of water to railway engines at the Gidrouzel station by means of over-head feeding tanks, and the supply of coal from bunkers. The absence of these facilities has led to a waste of time in the delivery of urgent supplies.

In an interview given at the end of February, Eristov stated that 1953 should see the end of the "preparatory" period in the construction of the Canal and the beginning of excavation work along the main

alignment. The unusually early beginning of spring provided hope of accelerating the work of excavation, and in the first 16 days of February as much excavation had been done as in the whole of January. Eristov mentioned that the Takhia-Tash power-station will come into operation in the fourth quarter of 1953 and that work on the Kazandzhik and Sultan Uiz Dag power plants will be accelerated. The early spring would speed up all building operations, and he exhorted the workers of the Amu Darya shipping services to further efforts in their great task of transporting thousands of tons of building material. Their work would be facilitated by the addition of 12 five hundred-ton metal barges from Kiev which are now being assembled at Takhia-Tash. Eristov announced that work on the Feeder Canal was completed at the end of February. This canal was now filling up with water which enabled the dredgers to move up towards the projected entry to the main canal alignment. Eristov reckoned that the expenditure of water on irrigation, on filling the reservoirs and from evaporation would be about 70% of the total inflow.

During 1953, it is hoped to penetrate the desert to a distance of 160-170 kilometres in the north-east, construction bases being established at Shakh Senem and Zengi Baba. Penetration from the south-west is expected to reach Kurtysh Baba. For some time, however, the main bridgeheads will be Takhia-Tash and Kazandzhik.

The Feeder Canal

The completion of the feeder canal on 28th February was made the occasion of a special ceremony held on 1st March to mark the end of the preparatory stage of the whole project. At 11.52 Moscow time, Eristov cut a tape across the triumphal arch at the canal entrance and fifteen scrapers, which had taken up their position on the edge of the main alignment, passed through, the roar of their engines breaking the silence of the desert. Blueprints for the excavation work to be done on the first kilometres of the main canal have been handed over by the Gidroproekt to the Uzbekgidrostroi and scrapers, excavators and dredgers will now turn west and start in earnest on their thousand-kilometre march across the Kara Kum Desert. The survey of the first kilometres is completed, but there are serious obstacles to be overcome including, for instance, the crossing of the Soviet Yab irrigation canal which is to be put through a concrete channel. Another difficulty to be surmounted is the crossing of the Daryalyk, the old bed of the Amu Darya river; a railway bridge will also have to be erected across the Tashauz-Khodzheili line.

New means of accelerating the work of excavation include the

provision by the Minsk works of new dumping wagons for moving excavated material. Arrangements are being made for the electric propulsion of excavators, and mobile workshops and garages are being organized to follow the excavation gangs into the desert.

Takhia-Tash

Considerable activity is reported in the south-western part of Takhia-Tash where work is progressing on the thermal power station. A foundation trench has now been excavated. In order to speed up this project and to supply the site with concrete, a temporary plant has been put up. Equipment for the new power station was already arriving in February and ten wagon loads of boiler parts have been supplied by the Barnaul boiler works. Work is also progressing on an overhead cable to be attached to towers on the banks of the Amu Darya and the foundations for the towers are being laid. They are to be 54 metres high. The cable-way will be 800 metres long and will thus be the longest in the whole Union.

Takhia-Tash transport facilities are being improved and a new airline is now operating between Takhia-Tash and Ashkhabad. The opening of another line between Takhia-Tash and Tashkent is contemplated, and both capitals concerned with the working of the Canal project would thus be connected with the Takhia-Tash bridge-head.

Although no general construction plan for the expansion of Takhia-Tash has so far been approved, the town boundaries are being extended and building is in progress everywhere. Scaffoldings were recently taken down from 50 new houses, and in the new blocks water-mains are being laid on. The road surfaces round the new blocks are being tarred. Activity has also been reported at the Ketmenchi heights, 2 kilometres from the present workers' settlement. Foundations are being laid here for the construction of the first two new blocks of a socialist settlement which is to be built according to a plan provided by the best architects of the Union. Special consideration has been given to local climatic conditions and the extreme summer heat. Not only houses, but all mechanical equipment and machinery working in the open are to be painted white and special ventilation ducts are to be built in the drivers cabins. Additional filters to protect engines from the fine dust of the desert are also to be used.

Advanced bases and new settlements

Work is progressing on the construction of an advanced base at Chapaevsk, 22 kilometres from Leninsk. Progress was at first

hampered by a shortage of water to overcome which it was necessary to clear the bed of the old Shamurat canal which was buried in sand. This Shamurat canal was a branch of the main Shavat canal which brought water to three districts of Tashauz. Severe winter conditions made the task of widening and deepening the Shamurat Canal in order to bring Amu Darya waters to Shakh Senem a formidable task, but a stretch of 30 kilometres has now been cleared. The old fortress of Shakh Senem is 86 kilometres from Chapaevsk and 110 kilometres from the Takhia-Tash promontory and is designed to be used eventually as a secondary advance base. At Chapaevsk there are now 20 houses, a dispensary, a power plant and an aerodrome. In order to facilitate the transportation of supplies to Chapaevsk, a railway loop known as No. 427 has been constructed between Urgench and Khodzheili. By means of this loop building materials and prefabricated houses are being carried across the desert to Chapaevsk.

At the South-Western end of the Canal alignment work is in progress at Greater Kazandzhik which is designed to be the main transhipping centre of the canal when completed. A new settlement is being developed at Bala Ishem well and electric current has already been supplied. One of the Canal branches is to reach the Kara Bogaz Gulf near the small settlements of Bektash and Sartas which are mentioned as places likely to be developed in the future.

Roads

The railway station known as Gidrouzel is to be connected with Takhia-Tash by an automobile and tractor road. This work is in the hands of Soyuzdorproekt, an organisation responsible for road survey and alignment. Roads totalling a length of 60 kilometres have been marked out from Takhia-Tash to various points in the desert. The first stage of the "Great Kara Kum Trunk Road" from Takhia-Tash to Chapaevsk is to follow the canal, not deviating more than 70 to 100 metres from its axis. In fact, two roads are to be built; one is to be a well laid out hard-surface permanent way for motor traffic, and the other a parallel track for temporary use during the period of construction by heavy vehicles such as tractors and trucks carrying building materials. The fact that the surface is saline constitutes a serious difficulty since the Soviet Code of Road Construction forbids or restricts the building of permanent roads on saline soils. A party of road surveyors recently surveyed the new alignment from the Amu Darya river to Chapaevsk and continued their reconnaissance as far as Shakh Senem. In the course of the next two months, this party is expected to reach the Danatinsk Gates, the corridor between the Kopet Dag and the Maly Barkhani in the neighbourhood of Nebit Dag.

Desert Reclamation

Desert reclamation involves two operations; the arresting of the movement of "barkhan" sands, and afforestation. Experiments in the new method of preventing sand encroachment have been carried out in the Nebit Dag area. This new method consists of solidifying the surface of the sand by pouring over it a thin layer of bitumen emulsion. It has been found that this layer of emulsion does not impede the growth of plants, which can break through it. An experiment designed to show the superiority of this method over the old system of protective covering screens gave encouraging results. On a hectare of land spread with the bitumen emulsion 200,000 plants broke through, while on a hectare protected with screens only 70,000 survived.

Extensive afforestation has been planned over the whole area. During 1951-1952, the "Agrolesproekt" carried out a general survey of 8,441,000 hectares and a detailed study of afforestation possibilities on 674,000 hectares. It is now proposed to plant a tree belt 100-200 metres wide on both sides of the canal alignment and a belt of 100 metres round water reservoirs. Along the larger irrigation branches of the main canal tree-belts are to be planted to a width of between 30 and 60 metres depending upon the amount of water available. Primary distribution ditches will have belts of 20 metres. Along the external limits of the irrigated zone the tree belt is to be 30 metres wide. Belts of 100 to 400 metres of trees are to be planted along city boundaries.

In order to supervise the work of afforestation, the Forestry Department is to establish centres at Nebit Dag, Tashauz and in Kara-Kalpakia. Considerable difficulties are anticipated in the South-Western end of the Canal zone, but in spite of the importance of the matter, little research has so far been done into the regular movements of sand caused by the winds.

A specific plan for planting in the north-eastern part of the Canal zone involves the preparation of 390,000 hectares for the planting of trees and 108,000 hectares for shrubs. Green belts are to be created around Tashauz, Kunya Urgench, Leninsk, Andreevsk and other places. The object of all these operations is not only to provide protection for the canal works and for irrigated lands, but also to mitigate the severe climatic conditions of the desert and to provide fuel and timber for the settlers on the newly reclaimed desert land.

Electrification

Electrification of the Canal Zone is keeping pace with the main work

of excavation. Last year, power was produced by temporary plants rigged on trains from which high voltage transmission lines carried current to dredgers and other installations. Apart from this there were over 80 small mobile stations in operation. Work on the permanent Takhia-Tash power station is now, however, well in hand and a power plant of equal capacity is being erected at Kazandzhik. Another power station is being erected at Kara Tau in order to speed up the quarrying of building materials. Work on the high voltage transmission line from Takhia-Tash has been begun. A transmission line from Takhia-Tash has been completed to supply current to the brickworks at Khodzheili and another line to Chapaevsk has been surveyed. There has been mention of a project to build a hydro-electric station at Ak Cha Kai, a locality on the main alignment which is specially suitable for this purpose since it is 95 metres below the sea level.

Scientific Research and Survey

Hydrological Expedition No.7 of the "Gidroproekt" recently arrived in the zone to reorganise research into the behaviour of the Amu Darya river. This expedition is also studying the flow of the Tash Sak canal which recently began to behave more like a river. Members of the 31st Expedition of the "Gidroproekt" have also arrived at Takhia-Tash and are busy carrying out a geological survey at the site of the headworks of the future canal. Drilling operations are continuous even in winter, when the ice on the river is one and a half metres thick and enables the drillers to erect their equipment over the riverbed.

Another recent arrival is a group of scientists composed mostly of agricultural experts and members of the Tashkent Expedition. The primary object of this group is to carry out comprehensive surveys on newly irrigated lands in Kara-Kalpakia. The group is to establish a station on 200 hectares of land in the Kegeilinski district where they will study methods of soil drainage in the Amu Darya delta. Another 200 hectares have been allotted to this group in the same district for the setting up of a permanent agricultural research station.

Personnel

There is a serious shortage of technically qualified personnel. Most of the local mechanics are not fully qualified and only recently a number of Diesel trucks arrived for which there was no competent

personnel. To meet this shortage an organisation has been set up for the mass training of personnel. The results of the training scheme are good and in the first year 500 recruits have been trained as excavator mechanics, Diesel truck drivers and electro-and motor-mechanics. A percentage of the workers at Takhia-Tash are old Volga-Don hands who require no additional training, but in March it is intended to begin raising the qualifications of 2,000 other men including 500 engineers and technical staff workers.

Party and Press Criticism

Great emphasis has been laid by the Party and the Press on the growing responsibilities of all workers in the Canal Zone. The tempo of work is being accelerated, the supply of material increased, roads made fit for the greater volume of traffic and power facilities brought up to requirements. Almost every branch of the project's activities has been subjected to criticism including planning, the selection of personnel, administration, the use of equipment and the proper application of funds.

Organisations responsible for the drafting of new plans have been found lacking in enthusiasm. "Ashkhabadproekt", the designers of a new settlement at Tashauz and, since 1953, of the Kunya Urgench house building project, have so far provided no general plan for the lay-out of these settlements, and in Tashauz only a few new city blocks have so far been completed. The "Sredazgidrovodkhlopok" (Central Asian Cotton Irrigation) is always many months late in supplying builders with drawings. Those for projects which should have been undertaken in 1952 were only delivered in November and December.

At the second Party Conference held in March and attended by canal builders, there were many complaints of a general kind about the selection, training, and allocation of labour. Appointments are often made with little regard to Party affiliation or to the capabilities of candidates. The Political Department was accused of a wrong approach to its work and of failing to give proper attention to fundamental issues. Nepotism is often rife in the filling of posts.

Complaints of defective organisation and administration have ranged over such subjects as the use of mechanical devices, the maintenance of supplies and the supervision of loading and storage. It is claimed that at times less than half of the available bulldozers and cranes are actually used, and that the performance of certain excavator gangs has seriously fallen off. The output of one gang, for instance, fell from

40,000 cubic metres in November to 30,000 in December, the reason being that the excavators had been served by only five or six rear dump wagons instead of the normal twenty. In some cases excavators are idle because of faulty power connections. Supplies are not properly maintained and in mid-December there was an unexpected shortage of Diesel oil which put many scrapers and bulldozers out of action. There was specific mention of the "criminally negligent manner" in which the unloading and storage of valuable cargoes had been carried out at Khodzheili.

An attack was recently made on Kalizhnyuk, a highly placed administrator of the project, for the poor standard of discipline which he maintained among his subordinates. This has resulted in neglect of valuable equipment. It was alleged that equipment for the construction of power stations at Sultan Uiz Dag arrived there long ago and that according to plan one power station should have been started by the end of 1952. In fact, however, the work of laying the power-house foundations had only just begun and even this had been done carelessly as no previous analysis had been made of the available building materials. Machinery was left lying in the open and had been damaged and to some extent removed. One case quoted of the misuse of funds was of the expenditure of 100,000 roubles on the cutting of a certain irrigation ditch for which there was no possible use and which was later abandoned.

Desert Reclamation

Desert reclamation involves two operations; the arresting of the movement of "barkhan" sands, and afforestation. Experiments in the new method of preventing sand encroachment have been carried out in the Nebit Dag area. This new method consists of solidifying the surface of the sand by pouring over it a thin layer of bitumen emulsion. It has been found that this layer of emulsion does not impede the growth of plants, which can break through it. An experiment designed to show the superiority of this method over the old system of protective covering screens gave encouraging results. On a hectare of land spread with the bitumen emulsion 200,000 plants broke through, while on a hectare protected with screens only 70,000 survived.

Extensive afforestation has been planned over the whole area. During 1951-1952, the "Agrolesproekt" carried out a general survey of 8,441,000 hectares and a detailed study of afforestation possibilities on 674,000 hectares. It is now proposed to plant a tree belt 100-200 metres wide on both sides of the canal alignment and a belt of 100 metres round water reservoirs. Along the larger irrigation branches of the main canal tree-belts are to be planted to a width of between 30 and 60 metres depending upon the amount of water available. Primary distribution ditches will have belts of 20 metres. Along the external limits of the irrigated zone the tree belt is to be 30 metres wide. Belts of 100 to 400 metres of trees are to be planted along city boundaries.

In order to supervise the work of afforestation, the Forestry Department is to establish centres at Nebit Dag, Tashauz and in Kara-Kalpakia. Considerable difficulties are anticipated in the South-Western end of the Canal zone, but in spite of the importance of the matter, little research has so far been done into the regular movements of sand caused by the winds.

A specific plan for planting in the north-eastern part of the Canal zone involves the preparation of 390,000 hectares for the planting of trees and 108,000 hectares for shrubs. Green belts are to be created around Tashauz, Kunya Urgench, Leninsk, Andreevsk and other places. The object of all these operations is not only to provide protection for the canal works and for irrigated lands, but also to mitigate the severe climatic conditions of the desert and to provide fuel and timber for the settlers on the newly reclaimed desert land.

Electrification

Electrification of the Canal Zone is keeping pace with the main work

of excavation. Last year, power was produced by temporary plants rigged on trains from which high voltage transmission lines carried current to dredgers and other installations. Apart from this there were over 80 small mobile stations in operation. Work on the permanent Takhia-Tash power station is now, however, well in hand and a power plant of equal capacity is being erected at Kazandzhik. Another power station is being erected at Kara Tau in order to speed up the quarrying of building materials. Work on the high voltage transmission line from Takhia-Tash has been begun. A transmission line from Takhia-Tash has been completed to supply current to the brickworks at Khodzheili and another line to Chapaevsk has been surveyed. There has been mention of a project to build a hydro-electric station at Ak Cha Kai, a locality on the main alignment which is specially suitable for this purpose since it is 95 metres below the sea level.

Scientific Research and Survey

Hydrological Expedition No.7 of the "Gidroproekt" recently arrived in the zone to reorganise research into the behaviour of the Amu Darya river. This expedition is also studying the flow of the Tash Sak canal which recently began to behave more like a river. Members of the 31st Expedition of the "Gidroproekt" have also arrived at Takhia-Tash and are busy carrying out a geological survey at the site of the headworks of the future canal. Drilling operations are continuous even in winter, when the ice on the river is one and a half metres thick and enables the drillers to erect their equipment over the riverbed.

Another recent arrival is a group of scientists composed mostly of agricultural experts and members of the Tashkent Expedition. The primary object of this group is to carry out comprehensive surveys on newly irrigated lands in Kara-Kalpakia. The group is to establish a station on 200 hectares of land in the Kegeilinski district where they will study methods of soil drainage in the Amu Darya delta. Another 200 hectares have been allotted to this group in the same district for the setting up of a permanent agricultural research station.

Personnel

There is a serious shortage of technically qualified personnel. Most of the local mechanics are not fully qualified and only recently a number of Diesel trucks arrived for which there was no competent

personnel. To meet this shortage an organisation has been set up for the mass training of personnel. The results of the training scheme are good and in the first year 500 recruits have been trained as excavator mechanics, Diesel truck drivers and electro-and motor-mechanics. A percentage of the workers at Takhia-Tash are old Volga-Don hands who require no additional training, but in March it is intended to begin raising the qualifications of 2,000 other men including 500 engineers and technical staff workers.

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UZBEKISTAN

Civil Aviation: its use in sowing and crop preservation.

At the September 1952 Party Conference, Niazov, the Party secretary, spoke of the growing importance of civil aviation and referred particularly to the use of aircraft for sowing and crop preservation.

The sowing of saksaul in sandy areas originated in Uzbekistan, but recently it has been more practised in Turkmenistan, and it is on the basis of experience gained there that sowing is now being carried out in the Kyzyl Kum and the Yaz Yavan deserts. This year's sowing is to be done by aircraft fitted with special appliances which were tested during 1952 in the Grand Turkmen Canal zone.

The Press is now advocating the greatly increased use of aircraft in agriculture and a plan is under consideration whereby aircraft should be attached to MTS (Motor Tractor Stations). The storage and accommodation facilities and the meteorological and radio installations already existing at these stations could be used by the aircraft for which aerodromes would, of course, be built. The plan evidently envisages that the control of these combined agricultural-technical centres would be under the MTS and the local authorities, these being better able to advise on peculiar climatic conditions than the central research organisations.

This plan is still in an embryo stage and has not yet been put into operation. It has however been suggested that special courses on "aero-chemical" methods in agriculture should be organized at Uzbek agricultural colleges.

Oil

During 1952, the work of the Andizhan Oil Trust was not on the whole up to its usual standard. In the first half of the year, the Trust fell short of its obligations by thousands of tons of oil. This did not however seem to cause any great anxiety either to the "Sredazneft" or to the Republican Trade Unions Committee, and both these organisations failed to take any practical steps to improve production. No thorough analysis of deficiences was made, shortcomings were not stigmatized and no "stakhanovite" or advanced methods of work were introduced in order to improve the output. The attitude towards the promotion of socialist competition was moreover largely perfunctory. A report on the work of the Trust revealed that the latent possibilities of improving work at the fields had not been exploited, that full use had not been made of up-to-date equipment and that a generally low level of technology prevailed at the Andizhan, South Alamyshik and Khodzhiabad fields.

Since the beginning of 1953 there has been a marked improvement. In the first ten days of January shipments of oil in excess of the planned output were recorded at Andizhan, Alamyshik and Palvantash. In February the Andizhan and Alamyshik fields exceeded planned production figures and four train-loads of oil left in excess of scheduled departures. This increase in output is partly due to operations undertaken in the repair and utilization of old disused wells. At the Andizhan field, Well No. 105 was specifically mentioned as "resurrected" after having been idle for 1½ years, and in February two other wells were re-conditioned in excess of the plan. This so-called "secondary utilization" of wells is also giving good results at Khodzhiabad and Alamyshik.

Experiments have been made with the pumping of water into oil bearing strata to achieve a higher percentage of extraction from the wells. Previously from 20 to 60% of oil remained unextracted, but by pumping in water under high pressure almost complete extraction has been achieved. In 1953 these experiments are to be carried out at Alamyshik and Khodzhiabad on an industrial scale. Powerful pumping stations are to be established and at Khodzhiabad the sinking of one of fourteen projected water wells has actually been completed.

At South Alamyshik Oil Well No. 380 was put into operation four days ahead of the time-table and production has so far exceeded expectations.

Work is nearing completion on the automatic control of wells in the first Sector of the Alamyshik field. Experiments in this automatic control from a distance of several kilometres are being made and their success would mean that a single despatcher could simultaneously control the electric motors and other equipment regulating the flow and discharge of oil from several wells.

Last year the Palvantash oil field stood out as a brilliant exception among the oil fields of the Andizhan Trust; it produced several thousand tons of high-octane fuel in excess of the plan and cut down production costs by one million roubles. Palvantash has maintained its record this year, particularly in drilling. By the beginning of January 600 metres of new drilling had been carried out on account of 1953 by one gang, while another had succeeded in drilling to a depth of 2,500 metres, a record for "turbobur" drilling in this area. The annual plan has been carried out and costs lowered. Considerable economy has also been achieved through the introduction of the so-called "combined" (kompleksionnyi) method of operations.

Among operations carried out in the Trust oilfields was the so-called acid treatment of hard strata, which when encountered hindered the seepage and free movement of oil. Acid treatment does not seem to be fully effective when oil contains a high percentage of paraffins, resins or asphaltenes. In such cases, recourse is had to "thermo-acid" treatment which increases the flow many times. Thermo-acid treatment has been applied at Alamyshik with the result that Well No. 326 produced 45 times more oil than before. In 1953, thermo-acid treatment in the fields of Andizhanneft is to be increased fivefold by comparison with 1952 and is expected to result in a considerable increase of output.

In order to carry out the 1953 State plan, deep prospecting is to be undertaken on a larger scale. Drilling gangs are going over now to what is termed an intensive application of the latest technique of turbine drilling. In 1953, the use of the Turbobur method will be seven times greater than in 1952. At Khodzhiabad an economy of 200,000 roubles was achieved in a short time by using local loess loams, instead of the costly barytes, as an aid in drilling.

Another technical problem solved is that of the dehydration of oil. Owing to the presence of a high percentage of water at some of the wells, treatment of oil has been found very difficult and in certain cases impossible. The usual method of dehydration is by heating the oil to 40 - 50 degrees and then allowing the water to settle slowly. This method is, however, costly and affects the quality of the oil. A new

method has now been introduced at the Andizhan fields which consists in separating the oil emulsion by electrical means. Equipment for this process is also to be erected at Palvantash.

Late March reports emphasise the excellent results obtained since January. The production and survey programme for the first quarter of the current year has been achieved, the Alamyshik and Khodzhiabad fields showing the best results.

Railways

In the period between the 10th and 11th Party Congresses, the total of freight loading on the railway increased by 56% and the total of freight carried by 77%. The expansion of the cotton growing industry is likely to result in still further increases and steps to raise freight carrying capacity have thus become necessary. At the 11th Party Congress held in September 1953, Niazov, the Party Secretary, advocated the speeding-up of the turnround of trucks and the reduction of time spent in loading and unloading. He also insisted on stricter labour discipline and on adherence to the "Technical Regulations for the Working of Railways" which were recently revised and re-issued for general guidance on 15th August, 1952.

At the Congress, Niazov spoke in a general way about the completion of the Angren coal branch-line and of the rebuilding of many stations and tracks. He emphasised the importance of this work, but did not give any details.

Increase of freight capacity

Among practical measures to increase the volume of freight is a plan to utilise to better advantage the haulage capacity of locomotives, and this has now been extended to the whole of Central Asia. Late last year Tashkent Diesel engine-drivers accepted a challenge from the Ursatyevskaya locomotive depot to haul trains exceeding the prescribed limits by 200-300 tons. This particular competition, however, made a poor start, for after a month of delays, no trains heavier than the average actually left Arys, owing to the reluctance of Arys locomotive-shed workers to form such trains. In this they were supported by the management of the railway, which abstained from encouraging them for a number of what they called "objective" reasons. Matters improved, however, when a Tashkent engine-driver went to Arys, had a train made up weighing 313 tons above the average, and triumphantly brought it to Tashkent two hours ahead of schedule. Trains reaching Kyzyl Tukmachi from Angren have frequently exceeded the average by as much as 1,100 tons. A total of 37 heavy trains were despatched from Angren on the branch line during May, June and July.

Loading and Unloading

Another means of increasing the volume of cotton freight traffic, especially at the height of the season, was prompted by socialist competition and consisted of a move towards the more efficient loading of cotton onto railway trucks. Last year, for instance, the stations at Chinaz, Chirchik, Keles and Kaufmanskaya exceeded prescribed cotton loads, by a total of 6.960 tons of cotton. This meant the release for other services of 592 railway trucks and a saving to ginning mills of two and a half million roubles in transportation charges.

The movement for more efficient and tighter loading was not confined to cotton, but included cotton-seed. Chinaz, Chirchik and Keles stations loaded 2.466 tons of seed above average, thus releasing 162 trucks for transporting agricultural machinery, piece-goods in bales, bricks, etc. From August, 1951, at Kaufmanskaya and Yalangach stations, the loads of bricks on four-axle trucks was increased from 27-33 tons fo 42-48 tons. In 1952, 12,300 tons of bricks were loaded in this way, releasing 660 railway trucks for other purposes.

In contrast to these innovations in loading methods, "Uzbekselmach" refused to experiment with the loading of ODN spraying machinery on the pretext that they had no special allowance for additional ropes to secure loads from shifting whilst in transit. At Kuchluk, Chigirik, Pargos and Aranchi stations several hundred tons of raw cotton were loaded monthly at an average of 5.5 tons against the prescribed 7 on two-axle trucks and 12 against 14 tons on four-axle trucks. This resulted in considerable waste of freight space which could have been avoided if efforts had been made firstly, to pack the bales of raw cotton properly, and secondly, to have them efficiently loaded onto the trucks.

In November and December 200 railway trucks were under-loaded at Chigirik and Kuchluk stations by the Tashkent Cotton Trust. In the same two months hundred of railway waggons and trucks were under-loaded by the railway as freights contracted for were not punctually delivered at stations. Many trusts were suffering serious losses by having to pay fines for holding back trucks for periods ten times longer than allowed by regulations, and in the first eleven months of 1952, the Tashkent Textile Combine wasted 370,000 hours and was liable for fines of over three million roubles. Other defaulters were the Cold Storage and Fuel Trusts which took six and ten times longer than the stipulated time to complete loading and unloading operations.

Other complaints were of poor work on night loading shifts. On the Tashkent section of the railway only 27% of night loadings were made instead of the 50% laid down, and only 21% on unloadings. A number of trusts were reluctant to work at all on Sundays and holidays.

Sidings

The equipment for dealing with freight at railway sidings controlled by certain trusts is inadequate. At the "Uzbekselmach" sidings, for instance, the platforms are not long enough, there is poor lighting and no facilities to deal with bulk liquid freights. Even the tracks on some of the Trusts' sidings are in poor condition, particularly at Kadyrma station where the track is so bad that railway waggons could not be shunted onto their sidings at the proper speed.

Chardzhou-Kungrad Line

Late in 1952, the Press reported progress in the construction of the Chardzhou-Kungrad line as follows:-

The Chardzhou-Urgench section of 400 kilometres

On this much work still remains to be done on buildings, Diesel locomotive sheds, warehouses, etc. 20 station buildings await completion, including those at Urgench, Dargan Ata, Khazarasp, Khanki and Pitnyak.

The Urgench-Takhia-Tash section of 122 kilometres

This section is in restricted operation. Engineers aim at bringing the entire section into line with normal technical requirements in the near future, without interfering in any way with the continuous flow of freight traffic to Takhia-Tash.

Takhia-Tash-Khodzheili section

The laying of the track has been completed, the first train reaching Khodzheili on June 15th. Movement of service trains and of priority freight on this section has been assured.

The Khodzheili-Kungrad section of 80 kilometres

The track is being laid. All earth-work has been mechanised and rails are being laid by cranes operating from railway trucks.

Urban Development

At the Conference of the Uzbek Communist Party held last September the Secretary of the Uzbek Party, Niazov, mentioned that extensive work had been undertaken in the development and improvement of cities which continued to "grow and prosper". Specific mention was made of Chirchik, Begovat and Almalyk. Reference was also made to Takhia-Tash, a city in which Uzbek, Turkmen and Kara Kalpak interests merge.

According to Niazov, large funds have been set aside for urban improvements in Uzbekistan, but these are not being fully utilised owing to manpower shortages, scarcity of building materials and the failure of responsible party committees to insist on the execution of directives for the speeding up of building activities. Niazov also referred to the poor working of such municipal undertakings as hotels, public baths and laundries.

The following information about various towns in the Republics has been compiled from various press reports.

Tashkent A considerable increase in industrial and domestic building projects is envisaged in the current five-year plan. During the past two years 430 million roubles has been invested for these purposes, an amount which exceeds capital investment for the corresponding period of the fourth five-year plan. It has been mentioned that during this period 42,000 square metres of domestic housing were built.

A four-storey building to accommodate the Uzbek State Institute of Projects is being put up in Navoi street. On completion this will be one of the largest buildings in Tashkent.

A period of twenty days ending on March 10th was set aside for the planting of trees. In all, 85,000 trees, 75,000 shrubs, 400,000 plants to provide live hedges and over 8 million flower plants are to be planted in the current year.

It is evident that the Tashkent waterworks in certain sectors of the city are unable to supply water to fourth-floor flats. This is said to be due to special conditions prevailing in the city.

Only 42% of the plan for capital repairs to many Tashkent buildings was carried out in 1952 and the quality of the work done was poor. The Government allotted 10 million roubles for Tashkent improvements, but so far the tempo of work has been slow. Among delayed projects are the Kibraisky waterworks and the laying of the Badjar, Labzar and Salar "collectors". The construction of a bridge over the Ankhor canal has also been delayed.

There have been many complaints of the city's electric trains not running to schedule and of conductors being rude to passengers. Transit passengers at Tashkent control station complain of lack of amenities.

Other improvements carried out in the autumn of 1952 included repairs to many thousands of square metres of domestic housing, the asphalting of streets, and the extension of lighting facilities. Repairs to tram lines and trams were attended to, and a new trolley-bus line connecting the Textile Kombinat with the Stalin, October and Kirov suburbs has been laid. The "Kolkhoz Market" area was also enlarged. A new street called the New Moscow Street leading to the Excavator and Electric Cable Works was opened. The construction of one-storey houses still predominates and the practice of rushing work through and handing over the houses for occupation while still unfinished persists. A large section of the city is in an insanitary condition. Sanitation regulations are not observed and inspectors are still too lenient in dealing with offenders.

Angren Angren is a typical mining city whose growth is closely linked with the development of coal mining in the Angren valley. During the past five years, production in the Angren coal fields has increased nearly threefold and a further 56% increase is stipulated in the current 5-Year Plan. Coal was first produced here in 1941 since when this large coal mining centre has considerably increased its production and now supplies coal not only to local industries, but to the neighbouring industries of Tadzhikistan and Turkmenistan. According to February reports, Angren has nine schools, eight libraries, three clubs, a mining industrial school and four hospitals. In 1952 five million roubles were spent on public health in order to keep pace with the growth of the mining population. The development of Angren as a city has been somewhat held up since it has not yet been finally decided whether development should remain under the guidance of the Ministry of Fuel as at present. The City has outgrown its purely mining functions and has become an important regional centre with whose development republican, regional and local interests are concerned.. It

is thought by some that it should become a republican responsibility and develop as a city administered solely by municipal bodies.

The slow development of communications within the radius of the city is a good example of the delays in expansion. Angren is an extensive city: it takes about 25 minutes to reach the centre of the town from the miners settlement in the suburbs and the railway station is six kilometres from the city itself. The need for transport improvements and the inconvenience experienced by the population were recognized by the Uzbek Council of Ministers in 1951 when it instructed the Ministry of Motor Transport to establish a motor transport base as well as bus and taxi parks. That this decision has not so far been implemented is an illustration of the delays in carrying out government decisions.

The construction of new buildings is being actively pursued, but there is still no general plan for developing the city. Even if there were, Angren has no central authority which could coordinate new construction projects. This deficiency is noticed in the press as a common feature of Central Asian town development and is characteristic of many mushroom cities in the Union. Public buildings are constructed according to plans drawn up by individual trusts without the approval of a central planning board.

Angren is called the "City of Youth" as 60% of its population are young people who have flocked to Angren from various parts of the Union in search of work.

Andizhan Work is proceeding on improving the layout of streets and squares. Lenin Street and the Station Square have been asphalted. There has been improvement in the water supply and gas for lighting and heating is now more extensively used in schools, municipal buildings and private houses. The new gas main was laid only recently, but there is already much talk of making gas available throughout the town.

Yangi-Yul Yangi-Yul is another large centre of the republic created during the Stalin epoch. It has cotton processing, fruit canning, wine producing, clothing, shoe and other factories for the mass production of utility goods. It boasts of a new cinema, of a ten-year normal school and of a theatre with its own native musical comedy repertoire. In the space of two years 300 dwelling houses have been built and in 1952 about a million roubles was spent on general improvements. In the current five-year plan three schools, a number of houses, a clinic for children and a House of the Soviets are to be erected. Waterworks and a sewage system are to be completed within the same period.

Chirchik. Chirchik is now a large industrial city and a leading electro-chemical centre of the republic, it produces nitrogenous fertilizers and equipment for the chemical industries.

At a recent town conference it was alleged that the political atmosphere in the city was not healthy, that responsible party workers failed to provide the necessary guidance for the political education of those eligible for promotion, that they persistently made attempts to stifle constructive criticism and that this had a bad effect on municipal affairs.

There is no comprehensive plan for extending the electric power supply to meet the growing requirements of the city.

Begovat. The principal industries of this busy centre are not alone in the slow execution of state production plans. Municipal activities leave much to be desired and even the municipal hotel is badly run down. Many of its rooms can often not be used because furniture, fittings and even bedding has been lent to private users outside. To improve this state of affairs adequate funds have been allotted, but have been only partially used.

Vannovskaya. The settlement here is growing rapidly as it has to accommodate workers from the oil fields. In the post-war period considerable amenities were introduced, including a club, a library and a creche for the children of working mothers. There are new straight streets with rows of two-storey houses, and in 1953 it is planned to build 3,000 square metres of domestic housing, public baths and also a cultural centre.

Urgench and Dzhizak. The extremely poor condition of the city streets has been frequently referred to, and especially in Urgench, where roads are in a shocking condition. The surface of the road from the station to the Urgench Regional Soviet Building is so bad that in spring and autumn few cars can force their way through without getting stuck in the mud. Pools of stagnant rain water remain in the market and in the Red Square, a state of affairs reflecting adversely on the local Soviet administration. These remarks are also applicable to Dzhizak where road conditions often make the use of motor transport practically impossible. Considerable work has been done at Urgench station. In ten months workers of the 5th Construction Unit have built 27 one- and two-storey houses and two workers' hostels. In the river section of the town a number of municipal buildings have been created, including a communications' centre, shops, public baths and a restaurant. A school building will shortly be completed.

TADZHIKISTAN

Collective Farms (Kolkhoz)

Party and Press comment on the state of collective farming presents a somewhat varied picture. Reports of ambitious planning, new methods, increased area under cultivation, more machinery and better organisation of labour, all resulting in an increase in earnings, are to some extent offset by complaints of inefficiency, waste and obstruction.

Planning and Progress

Since the Seventh Party Congress in 1948, Tadzhikistan has received considerable help in equipment, technical advice and supervision. During the past three years, seven new M.T.S. and five new M.Zh.S. (Mechanized Animal Husbandry Stations) have been opened and there are now a total of fifty M.T.S. in the Republic. There has been a considerable advance in mechanisation and particularly in the use of the 15 H.P. tractor. This additional assistance, and the progress which resulted, caused a wave of optimism and the target for cotton deliveries was raised by 80,000 tons. This target has not in fact been attained. 1949 and 1951 were bad years for cotton growing and it was only possible to maintain the 1948 output. In many districts this set-back was attributed to the low level of Party guidance, to gross errors in the application of agricultural technique, to inefficient publicity and to the general feeling of complacency caused by good results in the past.

New Policies and Methods

Since the war two new policies have been inaugurated which have had an important effect on production. The first of these is that of "consolidation". This involves the amalgamation of two or more kolkhoz estates and the subsequent extension of their land. For example, in 1950 four kolkhoz estates of the Karasu districts were consolidated into the Tehlman kolkhoz. The beneficial effect of this amalgamation was already being felt by 1951 when seasonal field work was completed more quickly than previously and the standard of work was noticeably better. The annual earnings of this new kolkhoz went up by 9 million roubles owing to an increase in the average cotton yield to 36.1 centners

per hectare thus exceeding the estimated target by 5.86 centners. In some cases as many as seven smaller kolkhoz units have been amalgamated with excellent results. The second new policy has resulted from a decision to break up and realign the old permanent irrigation system of canals and ditches. This has involved the filling up and abandonment of obsolete and ineffective canals, and has had the effect of enlarging individual irrigated plots and thus making possible a better use of machinery which could not have been used on the smaller plots. The new system is much easier to maintain especially in respect of soil improvement and desalination. By 1952 the new system had been applied to four-fifths of the cotton fields of Tadzhikistan and resulted in the area under cultivation being extended by two thousand hectares. This was only made possible by the provision of a greatly increased quantity of mechanical equipment of which, however, full use was not being made especially in the Kulyab and Leninabad districts. Failure to implement the new policy by 100% was due partly to opposition by individual owners of holdings, the new system having abolished all old boundaries represented by ditches and canals. There has also been a tendency for Party organisations to disassociate themselves from the new system on the pretext that it was not their affair but that of the Ministry of Irrigation.

New Difficulties

The overall result of these two new policies has been considerable. Their introduction has created a greater number of really large communal estates and there are now about 400 so-called "millionaire" kolkhozes in Tadzhikistan, that is, kolkhozes with an annual output valued at over a million roubles. Consolidation has, however, brought certain difficulties in its train: although the larger kolkhozes are easier to control from the centre and can be better kept in line with immediate State requirements, internal supervision is more difficult where cultivation is scattered over larger areas. In some cases this has resulted in an unbalanced economy. In the Lenin kolkhoz of the Proletarsk region, for example, the cotton area has grown to 2,000 hectares, but pastures are now insufficient to provide for the combined cattle stocks of the amalgamated collective farms. The administration of larger estates requires a higher degree of specialised agricultural knowledge than can be found in the managers of small kolkhoz units. Combinations of the right political training and the necessary knowledge of practical farming are a rarity, and this has resulted in managers being tried out and changed far too often to ensure smooth running. There have been many cases of managers being dismissed or brought to justice for gross infringements of the Statute of the Agricultural Commune.

The extension of kolkhoz cultivation requires an increase in mechanisation and there has been difficulty in finding the necessary technical specialists for this. The performance of mechanical tractor and other mechanical stations has fallen short of requirements. This is especially true of Kurgan Tyube M.T.S. in spite of a decision to increase the effective working of the E 502 and ON 201 excavators to a monthly output of 20,000 cub. metres and of the E 257 excavator to 7,000 cubic metres.

Increased Earnings

The greater incomes now earned by kolkhozes have brought with them the problem of their proper and equitable distribution. In general, incomes are divided into the so-called "indivisible funds" for expansion purposes, and the amount distributed to the workers. A statement of the 1951 earnings of a certain kolkhoz showed 657,672 roubles as spent on mineral fertilizers, 83,705 roubles on building materials, machinery and prevention of agricultural pests, 400,000 roubles on pedigree cattle, poultry etc. A certain sum was also set aside for the training of machine operatives. There has also been a great increase in the earnings of individual kolkhoz workers. A case is quoted of a kolkhoz worker who in 1951 earned 21.8 roubles per workday in cash, plus a bonus of 2.28 kilos of grain. In 1952 the same kolkhoz was paying at the rate of 28 roubles per workday. Thus, a family with 1500 workdays to its credit would receive 42,000 roubles in cash, plus certain other payments in kind, which are not inconsiderable and have also increased during the past few years.

New lands under cultivation

The construction of the Great Gissar-Molotov Canal has resulted in 10,000 hectares of formerly arid land in the Surkhan-Darya district being put under cotton cultivation. Ten years ago the Gissar valley was practically uninhabitable, being little more than a reedy swamp, Some of the new Vakhsh lands have been colonised by farmers from the hilly Faizabad region and there has been a steady increase in production. The history of one kolkhoz shows that in 1948 it was only able to cultivate 50 hectares and with poor results. In 1949 ten hectares were added, but the yield amounted only to 8 centners per hectare. In 1950 another ninety hectares were added with the assistance of M.T.S., and the yeild brought up to 13.8 centners. Earnings at this time amounted to 700,000 roubles. In 1951 the area under cotton had reached 153 hectares, with 50 hectares under jute. 22.8 centners of cotton were collected that year and earnings rose to

1,600,000 roubles, averaging 19 roubles per workday per man. In 1952 it was anticipated that this kolkhoz would raise its cotton yield to 35 centners and its jute yield to 50 centners and that the earnings per workday would average 30 roubles.

Organisation of Labour

The organisation of labour in kolkhozes given up to general farming is evidently greatly inferior to that prevailing on the predominantly cotton kolkhozes. Examples are the estates in the Shulmakh and Garm mountain districts in which labour resources continue to be ineffectively used. In a certain commune in the Shulmakh region, out of 260 kolkhoz workers capable of work only 120 - 130 normally turn up for work in the fields. In some kolkhozes there is a tendencey to work "skopom". This means working as a gang with no specific responsibility allotted to individuals. It apparently results in workers devoting all their individual attention to their own allotments while the kolkhoz work is largely relegated to women.

The organisation of labour in the cotton kolkhozes is very much better. The normal unit of organisation is the "brigade" and the brigade foreman is responsible for the proper organisation and distribution of all work among the members of his brigade. He is expected to exploit to the utmost the inherent resources of his particular area and his duties include the maintenance of labour discipline. In these kolkhozes the tendency is to do away altogether with gang work (skopom) and a higher degree of productivity is thus ensured. On one kolkhoz with 460 hectares of cotton under cultivation with an estimated produce of 13,800 centners, the entire task of harvesting was done by ten brigades totalling 483 workers with another 50 held in reserve to be added at the height of the harvesting season. This means that about 85% of the total man-power of the kolkhoz is productively employed. Labour tasks are worked out according to season: from August 26th to September 15th cotton pickers average 30 kilogrammes per day and from September 16th to November 5th 70 kilogrammes. Generally speaking picking is organised according to grade, and those responsible for picking mixed grades have to sort out their pickings after working hours. No cotton is kept in the fields for more than 24 hours and to achieve this kolkhoz carters have to move 1,400 kilogrammes of cotton daily. They make two round trips bringing mineral fertilizers on their return journey.

Inefficiency, Malpractice and Obstruction

Complaints of inefficiency and malpractice are given steady publicity in the Press. Lack of supervision by Party committees is found to be the principal cause of these shortcomings. Faulty accounting and negligence in the checking of cattle stocks are the result not only of inefficiency and inexperience, but also of criminal tendencies on the part of kolkhoz managers. The selection of senior kolkhoz personnel is often on the basis of nepotism, particularly in the Gorno-Badakhshan region. This creates a family atmosphere quite unfavourable to proper communal development. Cultural services are often inadequately organised. One kolkhoz, for instance, has a library of 500 books which are never used. The same kolkhoz has a radio-diffusion station, but no facilities were provided for the extension of the service to houses of individual farmers.

In some districts, Asht for example, publicity for the harvest targets and economy campaigns is highly inefficient. Although the harvest here was good, those responsible for Party discipline were seldom seen in the fields.

Instances of the existence of indifference and slackness can be found in attempts to mislead inspecting officials by the staging of what is known as "Potemkin villages". (Note: this refers to the story of how Marshal Potemkin used to build model villages for the purpose of deceiving Catherine the Great.) This trick takes the form of demonstrating intensive activity along the edge of cotton fields near the road in order to impress inspecting commissions. Determined inspection has revealed that entire fields so arranged have in fact been choked with weeds, not having been attended to for at least three weeks. Even in such districts as Voroshilovabad, Kaganovichabad and Oktyabr where the autumn crops were good, there were also fields where the weeds were higher than the cotton itself.

There have been cases of resistance to the use of machinery. In the Molotovabad area not a single tractor was to be seen in the fields during the month of August, partly because M.T.S. directors in this district held the opinion that tractors should not be used in cotton fields in this month. In many kolkhozes the spraying of cotton by hand is preferred to the use of ODN sprayers, which often remain idle. There is also resistance to the use of such mechanical aids as narvesters and aircraft. For instance, a CXM 48 combine was introduced into a Kulyab kolkhoz. This combine was first used in 1950 and can do the work

of 22 hand pickers. But before it can be successfully applied the leaves have to be stripped from the plants by chemical spraying from the air. This work is often delayed both by failure to prepare the chemicals properly, and by obstruction. An instance of the latter occurred when the manager of the Tehlman kolkhoz refused to provide local transport for a civil aviation pilot to inspect fields before carrying out spraying.

Urban Development

There are reports of the construction of communal building and domestic housing at a number of towns such as Stalinabad, Leninabad, Kulyab, Yavan, Kuibyshevsk, and Kyzyl Mazar. Buildings to house District Soviets are nearing completion at Stalinabad and Shartuz. A power station has been completed at Yavan.

In spite of evident progress there have been many complaints of the inactivity of the Construction Trust attached to the Council of Ministers. In the course of an eleven-month period in 1952 only 74% of planned construction was carried out in the Republic. Only 7% of the planned domestic housing was handed over by the Trust to occupiers while building under the control of local bodies was only completed to the extent of 4%. The reason for this shortcoming is found to be the acute shortage of labour, and especially of skilled workmen and qualified foremen and technicians. This prevented the full use of available machinery for building purposes. It is thought that if full use had been made of such machinery more women could have been employed on unskilled work than the 23% employed at present. As a result of this unsatisfactory situation it was decided at the end of 1952 to form a new Ministry to supervise the construction of domestic housing.

Stalinabad

In spite of large financial allotments and other facilities little progress has been made with industrial building. The supply of locally produced building materials and electric power to the vital project of the Cotton Combine has been seriously short of requirements. Bricks, cement and other materials have often been of such poor quality that workmen were unable to use them. A foundry at the "Traktorodetal" works, which should have been in operation in 1949, was not completed by 1952 and considerable sums allotted for this project remain unused.

There is evidence of better planning in the construction of domestic housing combined with shop and office space. All two- and three-storey buildings under construction in the centre of the town are now to include ground-floor space for Government post- and savings-offices, workshops, etc. A new covered market and a park in the Opera and Ballet Theatre area are under consideration. During 1953 about 30,000 ornamental plants, shrubs and fruit trees are to be planted. Street lighting is to be provided along an additional fifteen kilometres of roads and streets and thirty new hydrants to supply water for domestic use are to be erected.

Restrictions against the erection of mud boundary walls and barbed wire fences are to be enforced. In future no one- or two-storey houses are to be constructed along the main streets.

There are various criticisms of the municipal control of amenities. The running of municipal restaurants is strongly attacked. During the past five years, five directors of the organisation responsible for catering and their deputies have come and gone, and for unknown reasons hundreds of workers who knew and were enthusiastic about their work have had to leave the organisation. These frequent changes have greatly lowered catering standards; menus now consist of only a few items and even in summer there are no fresh vegetables.

The municipal authorities are also supposed to supervise a considerable network of small enterprises such as shoemakers, dressmakers and barbers' shops, working on a co-operative basis. Most of these concerns are very inefficiently run and swindling and profiteering are rife. Much of the malpractice is done under cover of the co-operative principle and relying on patronage from above. The dirty state of barbers' shops has been particularly mentioned and prices are said to be three time as high as those stated on the price-list. Other criticisms refer to sanitary conditions in the city, the streets and markets of which are constantly full of rubbish. The paving of streets in the new suburbs has been held up and has not yet been begun in the lower Varzob area (the site for the second Stalinabad hydro-electric plant).

Kurgan Tyube

This city is in the centre of the rich Vakhsh valley. At the 7th Conference of the Tadzhik Communist Party, Kurgan Tyube was earmarked for expansion in line with its expanding industries. During the first half of 1952 the production value of the city's industries was nine million roubles higher than in 1951. In spite of this, the town is still without electric power, the hydro-electric possibilities of the Vakhsh having so far not been utilised. There have been delays in carrying out other building projects. A building to house the Vakhsh Building Materials Conbine, started in 1947, has not yet been completed, and a kindergarten has been under construction for the past six years. A shortage which appears to exist in this as well as in other towns in Tadhikistan is that of repair workshops. There seems to be nowhere where clothes or furniture can be mended.

Leninabad

Progress reported in 1952 included the construction of two Middle Schools,

two cinemas and a mechanised bakery. More streets have been asphalted. Generally speaking, however, both industry and town-planning in this city seem to have fallen behind. The Town Council is criticised as inactive and there have been constant complaints of inadequate public baths and repair facilities.

Sovietabad

This is a new town whose official existence dates from an order of the Presidium of the Tadzhik Republic issued on 12th March, 1953. It is on the site of Ispisar, an old settlement at the Leninabad station which ten years ago was mostly inhabited by railway workers. It has gradually developed into an industrial settlement which now has a wine industry, a cotton-collecting organisation and mechanised stations. These stations are principally used for animal husbandry and for road construction and repair purposes. A further expansion of Sovietabad is envisaged and the town is expected to have a prosperous future.

Shurab

Since the war the output of the Shurab coalfield has increased three-fold, and this has resulted in a considerable expansion of the city. The town is now divided into forty-eight electoral wards as compared with eleven two years ago. During the past two years, twenty-eight blocks of flats and 3,200 square metres of domestic housing have been built, as well as a seventy-five bed hospital, a crèche accommodating 150 children, a stadium and a cinema. Plans are now under consideration for the further expansion of the city before the expiration of the current Five-Year-Plan. There have been some complaints about sanitary conditions and also of the ugliness of the houses which do not conform to any rational plan of city expansion.

Particular emphasis is being laid on the increased prosperity of the Shurab miners and also on their high technical and professional qualifications. There is a growing demand for radio sets, carpets and similar luxuries and more than twenty motor-bicycles are in use in the city as well as hundreds of bicycles. Several miners own "Pobeda" motor-cars. This new purchasing power is partly attributed to the recent distribution of old-age retirement gratuities. One miner is quoted as having collected 4,377roubles after twenty-one years' service.

Regar

Regar is the administrative centre of a cotton producing area in the Gissar valley. It was formerly a settlement and only recently acquired

the status of a town. It has an up-to-date cotton ginning plant and cotton oil-seed mills which were built since the war. During the past two years a number of new buildings have been erected including an hotel, a cinema and a school.

Gorno-Badakhshan (Pamirs)

Reference to this mountainous region are less concerned with municipal affairs than with the advance of animal husbandry and agriculture and measures to make kolkhoz economy more diversified and stable. Nevertheless, there has been a general drive by the Party to raise the political and cultural status of members in these remote parts. An indication of this is that since the 7th Party Conference 710 young people from the area have been sent to Moscow, Leningrad, Tashkent and other cities for professional and political training. It is now claimed that the population of this extensive area is 100% literate and that there is an ample network of primary and seven-year schools as well as a number of boarding schools. There are 130 clubs and "chaikhaneh" reading-rooms and 106 libraries with a stock of over half a million books. In Khorog alone there are two newspapers, one in Russian and another in Tadzhik. Health services have been greatly improved. Whereas before the Revolution the whole area was served by one army doctor at Murgab Post, there is now a network of hospitals with modern equipment. For instance, the Khorog hospital has a cardiograph and ultra-violet ray equipment. A surgical ward has recently been added to the Vanch hospital and one is to be added to the Murgab hospital shortly. Clinical laboratories are also to be opened both in Rushan and Vanch. All of these improvements have been made possible by the large proportion of the regional budget allotted for the advancement of social and cultural amenities. In 1952, not less than 53.4% of the budget was spent on these services. On the other hand, it is admitted that the Kirov Middle School in Khorog, one of the largest in the autonomous Gorno-Badakhshan region, is badly run. The school buildings are dirty, cold and uncomfortable, and children attend lectures in overcoats. None of the thirteen classrooms have been provided with teachers' desks or with stools.

Khorog claims the distinction of being the highest city in the Soviet Union. In spite of being 4,000 kilometres from Moscow, it is a progressive city and only recently 600,000 roubles were set aside for capital repairs to the municipal buildings. A new school and a bakery have recently been built and the regional construction bureau has undertaken to complete the construction of more water-mains, public baths, an agricultural school, an incubator station and of an eight-flat apartment house. The capacity of the existing hydro-electric power plant has recently been raised and the management have promised subscribers at Khorog, Shugnan

and adjacent kolkhoz estates an uninterrupted supply of current during the winter months and a possible extension of the power supply network. The town is brightly lit and the citizens are using electric power for their every day needs.

The Pamir Botanical Gardens play an important part in the life of Khorog and are now busily engaged in preparations for the spring. Six new hothouses have been built for growing cabbages and tomatoes, the irrigation area is being extended and the canal bringing water from the Gunt river enlarged. These gardens contribute to the development of gardening and fruitgrowing over the whole region, and have helped to establish a fruit orchard at Khorog, a mulberry orchard in the Rosht Kala district and an apricot orchard in the Shugnan area. This spring, over 6,000 seedlings of mulberry, peach and apple are being distributed, as well as seeds of locally acclimatised plants of North American and Far Eastern origin. In spite of these achievements the management of the Botanical Gardens is being criticised for not paying more attention to research and the improvement of fodder grass. Animal husbandry is the principal industry of the Pamirs region and the inadequate supply of fodder for the growing needs of the kolkhoz economy can only be overcome by the planned development of mountain pastures.

Murgab. There is a Biological Research Station here which, in collaboration with the Khorog Botanical Gardens, has done much to introduce high-altitude frost-resisting plants. An M.Zh.S. (Mechanised Animal Husbandry Station) was recently opened in Murgab. This is regarded as a remarkable achievement considering that motor vehicles did not reach Murgab until 1931. The scope of the station's work includes the harvesting of hay and the sowing of 100 hectares of virgin land. During 1953 it is intended to sow lucerne and clover. The station also trains tractor drivers and instructors in electrical sheep-shearing.

Culture and Political Training

The cultural needs of Tadzhikistan are catered for by the Academy of Sciences, the University and affiliated institutes, and by middle and elementary schools. Apart from these more or less formal educational bodies an important part is played by the political training organisation of the Communist Party and by Tadzhik literature.

The Academy of Sciences

The Tadzhikistan Academy of Sciences was founded in 1932 as a branch of the Academy of Sciences of the U.S.S.R. Later, it was transformed into a "filiation" of the Soviet Academy with six scientific research institutes, an observatory and several out-stations. The Academy is in the third year of its existence as an independent academic body and the range of its activities in scientific research is now considerable. Those of its geological section, for instance, have since 1932 included the survey of 250 sites of valuable minerals, while at its out-stations new varieties of cotton, fruit trees and lucerne and other fodder grasses have been studied and in some cases introduced. Its botanical section has been active in the acclimatisation of citrus fruits, especially lemons.

Since the Academy's foundation, scientists have published a number of papers and have become well known in the Union for their research work, thus testifying to the cultural advancement of the Tadzhik people as represented by its élite. The planned study of natural conditions in Tadzhikistan has thus been maintained by the collective efforts of an organised body of scientists. Much has been accomplished by the geologists, seismologists, geophysicists, zoologists, etc., connected with the Academy, and systematic weather observation has been organised and recorded in charts. The material collected from all these studies of natural conditions is extensive, but so far there has been no attempt to provide a comprehensive geographical study of Tadzhikistan as a whole. The need for such a study has long been felt, as scientists working on special subjects still have to use as background material information obtained from scattered sources such as encyclopaedia articles, which are often out of date. A recommendation has consequently been made that the Academy, as the principal scientific body of Tadzhikistan, should undertake the task of preparing a monograph on the "Geography of the Tadzhik Republic". Although the Academy has at present no geographical section or qualified personnel competent to handle this work, there are a number of scientists in the republic whose services could be co-opted for this special purpose. The first step should be the organisation of a Tadzhik

section of the Geographical Society of the U.S.S.R. from which the Academy could later draw the necessary personnel.

The departments of Language and Literature and of History are well organised for continuous and sustained research work, but through the very nature of their activities they are exposed to much adverse criticism. In 1953, the department of Language is to prepare for publication an outline of past and present Tadzhik literature, a scientific grammar of the Tadzhik language and a Tadzhik-Russian dictionary. Warning has been given against the pitfalls of "Marxism" in the scientific approach to these subjects.

Scientists of the department of Philosophy have been working this autumn on the translation of Avicenna's "Danishnameh" from Tadzhik into Russian and on his geological and mineralogical observations which are to be translated direct from the Arabic.

The archaeological department of the Academy has continued with the excavation of the Kala-i-Bolo fortress, an historical monument dating back to the 5th - 6th centuries. In the opinion of Tadzhik scientists, these excavations prove that the aboriginal culture of Central Asia was not submerged by the Arab invasion of the 9th-10th centuries. This event cannot therefore be regarded as a turning point after which the history of the people of Central Asia embarked on a different course. The excavations disclose that the fortress had three storeys, the first and second of which were built in the 5th-6th centuries. The third storey was added after the Arab invasion, but does not contain any new constructional features. It preserves the same architectural character and is built of the same materials as the older parts of the building. This is taken to prove that the architectural standard attained by the indigenous population before the Arab invasion persisted and was not submerged in the invasion.

A weak feature of the work of the Academy is what is considered to be its limited participation in Tadzhik economic life, and the inadequate study of the more urgent problems pertaining to the development of agriculture and animal husbandry. There is an absence of creative criticism in discussing the works and activities of fellow academicians at academic sessions and an attitude of self-praise and obsequiousness seems to have prevailed since the Academy's inauguration. As a result, certain departments, including that of geology, have made little progress in examining the results of the initial surveys carried out by joint expeditions.

Tadzhik State University

The state university was opened on 1st September, 1948. Following the

normal pattern of Russian universities, work is divided among four faculties, the faculty of History and Philology having an additional department for the study of Oriental languages. Since the foundation of the University the number of students has grown about fourfold, the present number being about one thousand of which about half are made up of Tadzhiks and Uzbeks. Last autumn there were 260 applicants for 225 vacancies, 138 of the applicants being Tadzhiks. During 1953, which is the first graduation year of the university, 160 students will complete their studies in geology, biology, history and languages, and 32 of them have been recommended for post-graduate work and an academic career. Special subjects studied have included spectroscopy and electronics. Studies in the faculty of History and Philology have included the classical and modern periods of Tadzhik literature and the development of the Tadzhik language and culture. Special importance is attached to a specialised translators' section which is designed to train linguists and journalists in the translation into Tadzhik of the Marxist classics, classical and modern Russian writers and representative works of other regional literatures of the Soviet Union and of world literature. The university has produced its first volume of scientific papers and several monographs on different aspects of Tadzhik history. There is a library of over 100,000 volumes.

Among other higher educational bodies on a par with the university are the Tadzhik Agricultural Institute which attracts a considerable percentage of Tadznik and Uzbek students, the Tadzhik Medical Institute for which 450 applications were registered for 300 vacancies, and the Stalinabad "Shevchenko" Teachers' Training Institute where 362 applications were made for 300 vacancies, 70% of them coming from natives. The Press deplores the fact that the percentage of Tadzhik girls at the Medical and Agricultural Institutes remains small. Steps are being taken to improve this situation.

Middle and Elementary Schools

The success of university education in Tadzhikistan is inevitably dependent upon improvement in the Tadzhik elementary and higher educational system. This system is defective in many respects. There is, for instance, no strict enforcement of the law of universal education, and not all children of school age are registered for this purpose. This is attributed mainly to the poor work of regional party committees who are too lenient in enforcing registration and the proper numbering of houses, without which universal registration of children is difficult. Even in the suburbs of Stalinabad houses were recently discovered which have no street number and whose owners or occupiers keep no registers of inhabitants.

The chief problem, however, is that of the provision of a sufficient

number of qualified teachers, for whom there will be a growing demand in the current Five-Year Plan, owing to the proposed 70% expansion. The quality of teaching must be improved, better text-books provided and new ones introduced for the teaching of language and literature, embodying Stalin's revolutionary principles. The majority of the old text-books have now been revised under the supervision of the Academy.

Discipline is to be more strictly enforced and measures taken to improve the low standard of results at boys' colleges. These include compulsory homework by backward pupils and action to restrict such misdemeanours as smoking and playing truant. The question of "polytechnic" education is to receive more serious attention. So far only the first steps have been taken towards its introduction since a number of responsible educationalists in the republic undervalue its importance and have consequently omitted to bring this home to school councils. The teaching of physics, mathematics, biology and geography is no longer to be merely abstract, but is to include a practical knowledge of the attainments of Soviet science and of mechanical technology. School children are to be taught the practical rudiments of such subjects as electrical engineering and the treatment of timber and metals. To achieve this, school premises will have to be enlarged, and mechanical and laboratory equipment supplied.

Meanwhile in a number of provincial towns considerable shortcomings have been noticed. In the Kulyab district teaching standards in elementary schools are low. Many children, and particularly Tadzhik girls, fail to complete the curriculum and cannot progress beyond the fifth or sixth grades. The number of children not attending school in the Kulyab district is particularly large, the registration of children even in Kulyab itself being inadequately organised. From the same district there have been reports of delays in repairs to schools, of deficient equipment and unqualified teachers who are often not engaged until after the beginning of term. A certain geography master was found to be teaching his class without the aid of a wall-map with the result that his pupils could not point out important places even in the neighbouring republics. When this teacher's own knowledge was tested on a map of the world, it was found that he could not even point out the Scandinavian Peninsula.

Considerable shortcomings persist in the teaching of Russian throughout the republic, particularly in country schools. The object of teaching Russian in national schools is to imbue children with an interest and love of the language of the great Russian people and to teach them its proper spoken and written use. But even after seven years' schooling, children are sometimes unable to differentiate between vowels and consonants; they cannot construe sentences and have little knowledge of Russian orthography and puncuation, and even of pronunciation.

The poor quality of the text-books and the lack of Tadzhik-Russian dictionaries are partly to blame for this state of affairs.

Party and Political Education

Political training, including the propagation of the theme of "Friendship with the great Russian people", is considered to be an essential part of general education. This training is designed to reach all sections of the population not only by means of the courses conducted at political training schools, but also by special lectures directed towards teachers, doctors and agronomists. Achievement in this latter respect falls short of requirements, the lectures being poorly attended.

The Party has grown numerically and in stature: in the past three and a half years it has increased its membership by 2,837 of which number 1,088 are natives and 798 women. Other statistics show that the number of members with completed or partially completed university training has grown by 802 and that of members with a complete or partial middle school education by 3,849. Illiteracy has been virtually eliminated. Since the opening of the political training school of the Central Committee of the Party a total of 491 students have taken the regular course and 239 the shorter course. During 1952, 79 out of 116 graduates were Tadzhiks or Uzbeks and an additional 39 have graduated from the shorter nine-month course.

In spite of the raising of the standard of education among Party members, there has been a good deal of criticism of Party work in general. Plenum and "Aktiv" sessions are often summoned not for business-lik discussion, but merely in order to demonstrate the Party strength and to give formal approval to decisions already taken beforehand. The discussions themselves are often crude and uncritical. Party work among women leaves much to be desired and insufficient attention has been paid to the small number of girls attending the University. The fact has been overlooked that in practice many Tadzhik and Uzbek girls do not reach the standard of graduation for the simple reason that they marry very young, often under the stipulated age, and are thus withdrawn from school attendance. In cases where women have been promoted to responsible Party posts, they have not been given proper assistance in the fulfilment of their duties. This is an indication of the survival of the old feudal attitude towards women.

Other services which have been made the subject of criticism are broadcasting and libraries. For technical reasons it is admittedly difficult to maintain a high standard of transmission, but the quality of local broadcasts is not high and does not satisfy the growing cultural requirements of the population. Last autumn the Stalinabad council of

workers' deputies made an attack on the inadequacy of the library service. Little publicity has been done to aid the circulation of the greatly increased stocks of serious literature and local councils do not exercise enough supervision over library routine. One of the best run libraries, the children's library in Stalinabad, was recently closed as the building was required for other purposes.

Literature

Articles in the Press on literary subjects lay particular stress on two themes: the need to regard the Tadzhik language and its literature as original rather than as a shadow of Persian literature; and the importance of regarding the blessings of creative labour as a more appropriate subject than descriptions of out-of-date conditions.

In developing the theme of the original and indigenous character of Tadzhik literature statements have been made that Firdausi and Saadi should not be regarded as Persian poets, but as early representatives of the Tadzhik tradition, and that the Avesta was a Central Asian and not a Western Iranian creation. Similarly, Rudaki, who is buried in the Pendzhikent district, was not merely a Persian court poet, but the forerunner and creator of classical Tadzhik poetry. Mirzazade, a professor of literature at the Teachers' Institute, was recently reprimanded for including in school programmes and books extracts from the work of Adzhzi (Note: the takhallus or pen-name of Said Akhmadkhodzha Sidiki). This writer is now considered to be an early exponent of Pan-Islam and Pan-Turanianism. The fact that he was until recently acclaimed as a progressive influence in the so-called "enlightenment" period of the Tadzhik is now deplored.

Recently written plays have had no success with Tadzhik audiences and have had to be withdrawn. The Government has offered cash prizes for outstanding dramatic works, but so far without results. Essays on literary criticism are mostly concerned with pre-Revolutionary literature and their authors show no inclination to discuss modern literary works.

Despite these shortcomings, however, there has been some improvement, and hard work, self-education and a greater attention to Soviet conditions are helping Tadzhik writers to see much that is good in life and to typify the characteristics of representatives of the new era. Sadreddin Aini, the originator of modern Soviet Tadzhik literature, has now completed the third volume of his memoirs and is continuing this work. Tursunzade has recently written a number of poems in a patriotic vein and is printing a selection of them on Soviet Tadzhikistan in "Sharki Surkh", the literary Tadzhik magazine. Ikrami has finished his short novel

"Three Sisters", Dzhalil is writing a book about Shurab coalminers, and Ulugzade is rewriting his novel about life in the Vakhsh valley. The works of the young poet Shukhuhi are also favourably commented upon as they deal not only with local themes but with events of all-Union and international significance.

The Tadzhik language is understood in other parts of Asia and progressive circles in Pakistan and India show considerable interest in modern Tadzhik writers. A number of letters come regularly from these countries especially about the poems of Mirza Tursunzade.

There has been criticism of Ikrami for a recent essay on his impressions of a journey to Kulyab, the object of which was to collect material for a novel on the life of the new colonists. It is alleged that Ikrami has failed to pay sufficient attention to a number of serious problems arising in this district, and has not explained why the Party and Government found it expedient to transplant inhabitants of the mountains to a valley region. From his brief notes, it can be deduced that the landscape is lovely and the roads bad, but this is not enough. The author describes the colonists as people who migrated of their own free-will, and their migration as a spontaneous uncontrolled movement. This is incorrect. He gives no indication of the great efforts made by Party and Government officials in organising and controlling this migration and in creating for the settlers conditions in which they can live a happy and prosperous live. In the same context he might also have described the help rendered to the Tadzhiks by the great Russian people.

KIRGIZIA

Cotton

Cotton growing is a comparatively new feature of Kirgizia's economy, but although confined to a limited area, it has considerable and growing export value. Since the Revolution there has been a determined drive towards expansion and this has resulted not only in increased production, but also in improved quality of the fibre due to a selection of higher grades of seed. It has been stated that the area of 21,600 hectares under cultivation in 1913 has now been more than doubled.

The various aspects of cultivation and harvesting receive great attention in the press. The Republic is being constantly exhorted to increase its cotton output, and thereby contribute to the prosperity of the whole Union and pay for the valuable technical equipment provided by Union centres.

The general means advocated by which a higher output can be achieved are the fostering of friendship and co-operation between men of science and cultivators of the soil, and the prompt and proper organisation of planting, cultivation, irrigation and harvesting. Among the practical measures taken has been the creation of the Kirgiz "General Cotton Experimental Station" situated on the Karasu trunk road, 8 kilometres from Osh. This station gives advice on many technical subjects designed to foster the extension of cotton cultivation. An example of this advice was that recently publicised in interviews and articles on the subject of the pruning of cotton (obrezka) as a means of raising yields. It was maintained that pruning carried out three times during the period of vegetation would improve the yield per hectare by 3 - 5 centners. The station has also been active in the selection of earlier ripening cotton varieties with larger pods and more resistance to climatic changes.

The expansion of cotton cultivation and the higher yields per hectare are part of a general advance in agriculture said to be due to the supply of more and better mechanical equipment to kolkhoz and sovkhoz

estates. By comparison with 1951, the area under industrial crops has grown by 6%, of which 4% are cotton; and the level of the cotton output by comparison with 1939 has grown by 26.8%. The supply of equipment to M.T. stations has been improved with the result that, since 1952, over two thirds of the main field operations on kolkhoz estates and over 90% on sovkhoz lands have been done by machinery.

Kolkhoz achievements

A textbook published in 1951 refers to the achievements of the "Kyzyl Shark" kolkhoz which produced an average of 33.14 centners of cotton from an area of 280 hectares, and of the "Kalinin" kolkhoz which attained an average of 27.2 centners from an area of 400 hectares. But these achievements are now out of date and have been superseded by a "35 centner" record by a brigade, and a "45-50 centner" yield by a lower field unit (zveno) from a smaller area. The whole Osh region averaged 23 centners and Dzhalalabad 22 centners, 26-7 centners having been set as a target by the 19th All-Union Moscow Conference of 1952.

The following details of the achievements of kolkhoz estates are quoted from the press :-

In 1952, the Karl Marx kolkhoz, thanks mainly to Socialist Competition drives, raised an average of 31 centners per hectare of cotton from 715 hectares, and its total revenues from all sources, but mostly cotton, exceeded ten million roubles. The financial position of the kolkhoz is evidently strong since it has accumulated at the State bank over three millions of "indivisible" funds. The "Karl Marx" is a well-managed kolkhoz which has made good progress in the change over to the new irrigation system. There are now only 200 hectares to be replanned for irrigation on the new basis. This involved the filling in of six kilometres of ditches, the levelling of one and a half kilometres of old roads, the excavation of substitute ditches and the transplanting of 300 mulberry trees. Supples of piece goods, vegetable oils, tea etc., acquired on the barter basis against cotton deliveries have been fully replenished. The gross earnings of families at this kolkhoz are considerable and continue to grow. A certain family, for instance, which in 1951 received as payment for work done during the year 3,520 kilos of wheat and 25,000 roubles in cash, last year received 4,800 kilos of wheat and 30,000 roubles in cash.

The Malenkov kolkhoz, one of the largest in the Osh region, has

raised an average of 27 centners from 800 hectares, while one of the brigades reached a 32 centner record. Against its 1952 cotton deliveries this kolkhoz received 1,530 tons of wheat, 43 tons of oilcake, $8\frac{1}{2}$ tons of vegetable oils, 84,000 metres of piece goods, 11 tons of cotton-wool and half a ton of tea.

The Kyzyl Shark kolkhoz of the Karasu district raised an average of 36 centners from 900 hectares and the Kalinin kolkhoz (Osh) an average of 31.1 centners from 1,500 hectares.

In the Suzak district all the fifteen cotton kolkhoz have increased their revenues twofold since 1950. They have set aside as indivisible funds eleven million roubles, and during the past two years have raised their average yield per hectare by eleven centners and their area under cultivation by 2,000 hectares. Of individual kolkhozes in this area the Kirov estate has attained an average yield of 36 centners and a revenue of nine million. Pay cheques for one workday at this kolkhoz have been exceeding ten roubles and three kilos of bread in kind. The Stalin, Lenin, Voroshilov kolkhozes of Suzak have also had an annual revenue of over eight million roubles.

The range of yields per hectare is not of course uniform but depends on climatic and soil conditions and on man-power. The highest record was that achieved by a "brigade" of the Molotov kolkhoz of the Aravan district - 54 centners from one hectare. In the Chu valley, on the other hand, 21 centners on 9 hectares was considered good in view of conditions prevailing there.

General Criticisms

There has been some general criticism of cotton growing methods and practices. The Dzhalalabad Party Conference held in the autumn of 1952 disclosed, for instance, that the Dzhalalabad region had not fulfilled its cotton producing quota for the last five years, and that local party organisations had so far failed to induce kolkhoz cotton growers to take a more active part in the struggle for higher cotton yields.

In certain districts (e.g. Leninsk) the area under cotton is expanding from year to year while the kolkhoz population has remained stationary thus causing a shortage of manpower. To meet this deficiency the transfer is recommended to such districts of population from the hilly regions of the Dzhalalabad Oblast where there is a

surplus of manpower uneconomically employed.

Psychological factors retarding further progress include widespread complacency among kolkhoz executives with results achieved. This leads to a slowing down of work in the cotton fields and is most harmful to the further extension and intensification of cotton cultivation.

Repairs to mechanical equipment, storage and drying installations are often delayed and are at times made too late in the season to be of immediate use. Sufficient mineral fertilizers are not available in some districts, and there are delays in repairing roads and bridges which hinder the speedy collection of the harvest and normal deliveries to railheads.

Failure of the 1952 Harvest

In spite of the achievements of individual farms, the 1952 harvest was unsatisfactory. Harvesting yields were below those of 1951, and cotton production quotas in the three cotton producing regions were carried out only to the extent of 88.9% (Osh 89.5, Dzhalalabad 88.75 and Frunze 89.1). Only four of 23 cotton growing districts fulfilled the plan, namely, Aravan, Leninsk, Karasu and Kaganovich.

Many specialists and kolkhoz managers hold the view that last year's harvest would not have been deficient in quantity but for a spell of bad weather which interfered with full collection. While expression of such misleading notions is considered harmful, official recommendations have been issued for the improvement in the working of cotton drying field plants. One hundred mechanical plants are to be in readiness for the 1953 harvest - 53 in Osh, 45 in Dzhalalabad and 2 in Frunze.

The main reasons for the failure of cotton deliveries last season given in the January-March press are as follows :-

The central authorities are inclined to disregard local conditions in their approach to practical problems of cotton cultivation. There has been a tendency to accept average statistics as satisfactory evidence of accomplishments and progress, and this has prevented steps being taken to examine more carefully the low attainments of backward kolkhozes with a view to improving their yields. A lack of proper control in implementing decisions has led to sowings not being completed within the time limit of 8 - 10 days and to M.T. stations not carrying out their contract obligations towards kolkhoz estates.

Anti-mechanisation trends and a reluctance to make full use of machinery have at times been evinced by kolkhoz managers, and there have been numerous cases of direct opposition to the use of cotton harvesters. This attitude has not been confined to local authorities, but is also displayed by members of district and regional party organisations.

Measures for the Future

In future, areas of cotton cultivation in the Republic are to be divided into four zones, each of which is to be given special consideration and guidance, namely, the valley zone, the foothills, the mountain and the northern zones. Instructions on sowing dates and other matters relating to cultivation are to be given with strict regard to the climatic, soil and manpower conditions prevailing in each zone.

As regards the use of manpower, working conditions in the fields are to be improved and "brigade" units organized on a better and more permanent basis. Absenteeism will not be tolerated; in the 1952 campaign too many able-bodied kolkhoz workers took little or no part in work in the fields, often shirking the prescribed hours of work by starting late in the day. A closer check is to be kept of work done, and the rules for the advance of cash and food supplies insisted upon.

The lessons derived from the 1952 campaign are to be applied in the first instance to spring sowing. There are to be larger deliveries to the fields of fertilizers, and 400,000 tons of local manures and about 25,000 tons of mineral fertilizers are to be put down in the fields in preparation for sowing. The available machinery is to be distributed with a view to completing sowing in 8 to 10 days, and, in addition to machinery, 300 horse-drawn ploughs and 2100 harrows are to be supplied to kolkhoz estates. Tractors are to be distributed among Osh and Dzhalalabad stations this spring as follows:

Types of Tractor	M.T.Stations, Osh	M.T.Stations, Dzhalalabad
C-80	36	19
DT-54	122	106
KD-35	6	4
STZ NATI	13	40

Kolkhoz Harvesting Methods

A detailed interview given by the manager of the Andreev kolkhoz provided much general information on harvesting methods. The Andreev kolkhoz has 760 hectares under cotton cultivation and in 1952 its deliveries of cotton to the State were to yield a gross ten and a half million roubles of which two million roubles were to be placed to the credit of an indivisible reserve fund. The harvest programme of this kolkhoz was based on the assumption that the time for the opening up of the pods would be about August 20th. Harvesting was timed to begin on September 5th and to be completed by November 7th, during which period a total of 2,590 tons of cotton was to be collected - 40% in September, 58% in October and 2% in November. To carry out this task 719 kolkhoz workers were detailed as follows: 44 to operate the harvesting machines, 550 as pickers, 30 as carriers, 50 for drying and packing, 10 for delivery work to the collecting centres ("khirmany"), 5 for unloading, 20 as creche attendants, and 10 as foremen.

The norm of picking for the season was fixed at 4,000 kilogrammes. Apart from handpickers, 9 cotton-picking machines were to be used, their success depending largely on the thorough preliminary destruction of the cotton leaves for which purpose 19 tons of calcium cyanamide and sodium silicate was to be sprayed by two tractor-drawn spraying machines of the ODN type. Each cotton picking machine was expected to collect 90 tons per season. A total of 810 tons of the anticipated harvest of 2,590 tons was thus to be picked mechanically.

The work of each individual kolkhoz cotton picker was accounted for and checked either at the central khirman, or at the smaller collecting centres none of which were located more than 250 to 300 metres from the actual site of picking.

To facilitate the work of checking, each picker was provided with a special identity card. Cotton pickers were issued with two aprons each. These aprons had three pockets into which the cotton was dropped according to its grade. Living conditions during the harvesting period were by no means easy, since, at the commencement of the picking season, the entire working population was brought from their homes to the cotton fields where temporary accommodation had to be arranged. Working hours were long and work continued "as long as it was light", with an interval of half an hour for lunch and an hour for dinner.

For the transportation of cotton from the fields the Andreev kolkhoz had two motor cars and 30 carts all of which could carry up to 19 tons of cotton in a single trip. From the field to the drying plants the cars made four trips a day and the carts three. The plants could only accommodate 40 tons at one time.

Coal

The coal industry of Southern Kirgizia is of considerable importance to the economy of Soviet Central Asia since its coal fields contain roughly 50% of the entire coal deposits of that area. Before the war, production of coal in these fields had reached about one million tons annually, a considerable improvement on the 1913 output of 144,000 tons, and even on the 1915 output of 188,000 tons. It can thus be said that the rapid development of coal mining in Kirgizia coincides with the Lenin-Stalin epoch and must be regarded as a post-revolution development. During the revolution itself, most of the Kirgiz mines fell into decay and the Kok-Yangak field was actually destroyed in the course of the Basmachi movement.

Kyzyl-Kiya came into prominence again in 1925. The restarting of Kok-Yangak dates from 1930. Tashkumyr came into being in 1935 and is thus the most recent addition. The one million tons produced before the war did not, of course, cover all the coal requirements of the Central Asian Republics, and coal has still to be imported from the Kuzbas. The output of coal in the Republic is however growing, and had improved by 16.5% in the period between the 5th and 6th Party Conferences. In 1951, however, seven mines had not carried out the State plan since, according to the Secretary of the Kirgiz Communist Party, neither labour cadres nor mechanised equipment had been utilised to their full capacity. By August, 1952, the annual plan had only been carried out to the extent of 57%, and this deficit could not be rectified during the remaining five months of the year. The post-war plan visualised the earmarking for industrial development of 20 coal producing areas with a total reserve of 5½ million tons and the actual opening of mines with an estimated output of 825,000. This would have raised the 1950 total to 1,600,000 tons, which was not in fact attained.

Recapitulating recent successes, the manager of the "Sredazugol" Trust stated that in any case achievements had been considerable as the entire production of 1913 constituted the present output of a single mine, and the output in 1951 had improved upon that of 1940 by one third. He reported improvement in 1952 and added that the miners had promised to extract 40,000 tons of coal over and above planned output in 1953. Apart from the individual efforts of miners, improvement is to be achieved by the introduction of the progressive "cyclic" method of mining, first introduced in the Donbas, and also by working strictly to time schedules (one cycle in 24 hours).

The Kyzyl-Kiya Field

This lies to the south-west of Osh on a branch line 48 kilometres from Skobelevo, on the Fergana valley railway circuit. This branch line is broad gauge as far as Kyzyl-Kiya station, the remaining three kilometres to the mines being narrow gauge. The Kyzyl-Kiya Trust manages the coal-fields within a radius of about 40 kilometres from this terminus. They produce brown coal which is considered best suited for briquetting, since when brought to the surface it is liable to weathering and self-ignition. These mines are deep-sunk, are mechanised and have electric locomotives for moving the coal. In 1951, the Kyzyl-Kiya field improved on its 1950 output by 9.5% and, over a period of eight months in 1952, by 15.5 %. Electric locomotives have now effectively replaced other means of haulage and in mines "4" and "4 bis" the "cyclic" method has been introduced. It is freely admitted, however, that of five mines controlled by the Trust, two have failed in their contracted deliveries and owe the State many thousands of tons of coal. New mechanical equipment has not been fully utilised and there have been delays in getting some of the appliances working. There are also shortcomings in the proper use of manpower and not a few miners habitually fail in the fulfilment of their daily norms. Mines No. 6 and "Komsomolskaya" owe the State large quantities of coal.

A report of 1st January confirmed that on 28th December the Kyzyl-Kiya Trust completed its annual production quota which had risen by 7.8 %, labour productivity at the field having increased by 10%. The "Dzhal" mine of the Trust held the lead and by January 1st had produced 14,000 tons of coal on account of the 1953 plan, "Dzhal" miners having under-taken to maintain production at a 120% level. The "Dzhal", No. 6 and "Komsomolskaya" mines had completed their production quota in the second year of the Five-Year Plan. According to statements made at the Kyzyl-Kiya Party Conference in January, the position at "4" and "4 bis" pits is less good. The party "aktiv" at these pits comprises seventy men, but has failed to step up production, even its own members not having fulfilled their production quotas. Socialist competition drives at these two mines are perfunctory, competition results are not properly checked and the valuable experience and example of Union miners are not followed. Local miners are moved from one job to another too often, and there are repeated cases of absenteeism and breaches of labour discipline. The management is inclined to condone these breaches and to put forward excuses for infringements of the labour code.

Kyzyl-Kiya miners are to increase their output in the Five-Year Plan by 57%. 50% of all operations at the mines are to go over to "cyclic" production, and during 1953 new cutting and loading machines are to be introduced. Early in January telegrams recording production feats were

released for publication and the management was jubilant. All the troubles and difficulties of 1952, the end-of-the-month rush methods ("shturmovshchina"), night shifts and similar annoyances were believed over. But in February less enthusiastic reports ensued. Output at "No.4" and "4 bis" pits was obviously dropping owing mostly to the poor use of machinery. Not a single cutting machine had been in operation at these pits, the pick and shovel being still the implements most used.

As in Sulyukta, the Kyzyl-Kiya Trust had tried to impress upon "Sredazugol", its parent Trust, that in view of local conditions the mines could not profitably use modern coal machinery. Geological peculiarities, it was claimed, made the introduction of modern combines and the "cyclic" method impossible. So far no cutting machinery is in use and blasting is still preferred, although the latter causes delays in the clearing of coal since half of the loading machines at times remain idle.

There has been considerable improvement in living conditions at Kyzyl-Kiya. In 1952, 2,500 metres of domestic housing was handed over to prospective occupiers, that is, more than the total for the previous three years. According to other reports, by the end of 1952, thirty-six two-family houses had been erected of which six were to be handed over to war invalids and widows living at the mines. Building was being continued even in winter and in February this year work on 30 new houses was started.

Professional training is now well advanced since the Kyzyl-Kiya Mining Institute has already been in existence for 20 years. Kirgiz native students, however, remain backward in their training, especially in the study of Russian and mathematics. There are also complaints of the training being too theoretical, there being no auxiliary training workshops in this Institute.

Sulyukta

This is in the extreme south-western corner of Kirgizia and can be reached from Dragomirovo station by a narrow gauge line 40 kilometres long. The Sulyukta Trust controls four coal-bearing fields of brown coal with a calorific value of over 5,000. In 1905 production at Sulyukta reached 3,842 tons which grew to 13,000 by 1913. In 1925 one mine only was in operation, and the miners lived in temporary felt tents. Mechanisation at the "Sulyuktaugol" field is now well advanced, and the standard of organisation is high. Miners are imbued with a high sense of labour discipline and consequently raise their level of production every year.

One of the Sulyukta mines is mentioned as managed by a Kirgiz who nursed it back to life in 1948 when it was the most backward mine of the area.

The working of this pit has now greatly improved. It has electric locomotives, and the mechanisation of coal extraction had enabled the management to cut down its labour cadres by 200 men and at the same time increase production by 60%.

It was reported in January that the 1952 plan had been fulfilled by the Trust ahead of time and that by March 1st the miners of the first sector of Mines Nos. 2-8 and of the second sector of No. 9 had carried out their February plan. No. 9 had been lagging behind for a long time, but a radical improvement was achieved in January when planned tasks were exceeded for the first time. February showed still further improvement.

A "Donbas" Combine was recently installed at one of the Sulyukta mines and to work it the whole labour routine at the mine had to be changed, underground facilities improved, and a larger number of pit-props used and their bracing strengthened. Above all miners have had to be properly trained to operate this combine. Apart from these technical difficulties, it has also been necessary to overcome the negative attitude of a section of the miners who maintained that the coalfields of Central Asia, with their sagging seams and the consequent pressure on the roofs of the galleries, are unsuited for the use of the "Donbas" Combine. These initial protests have now been overcome and the "Donbas" put successfully into operation.

Mining conditions at Sulyukta are now considered favourable for the introduction of complex coal-mining machinery, of remote and automatic controls and similar advanced methods. The modernisation of mining methods at pits No. 4 and 2 - 8 has led to an appreciable increase in output, following which the numbers of rail tracks, passing places and electric locomotives have also had to be increased. The concentration of mechanical equipment at the mines demands an extension of technical control and a higher level of despatch work which is becoming of such vital importance to automatic operations. Last year, at No. 4 pit, a 73% output improvement followed the introduction of mechanisation, but it is thought that even this increase will be too small to meet the demand for a 43% increase in coal output in the fifth year of the Plan made on Kirgizia at the XIX Party Conference unless the whole potential of the mines is mobilised and mechanical cutting of coal introduced. This latter innovation is at present impossible, since pits Nos. 6 and 9 have not been prepared for the use of cutting machines.

Kok-Yangak

The two coal-fields of the Dzhalalabad region are Kok-Yangak and Tashkumyr. Kok-Yangak is only 25 kilometres to the north-east of

Dzhalalabad and produces good quality hard coal with a calorific value of about 6,000 - 6,500. Mine "39 bis" of this field produced over the half year 6,800 tons above its contracted plan. Mine "40" has also shown some improvement, said to be due to an intensification of Party work among the miners. "Kapitalnaya" mine is now working the new "cyclic" method of production, with a resulting rise in productivity of two and a half times. It has also cut nett costs by 5%. In spite of this achievement, there were complaints that this mine had failed in its planned deliveries both in July and August 1952 and that its labour discipline was low.

Further complaints were registered in March of the ineffective use of mechanical means at this field with the result that targets of planned output since the beginning of the year have not been fulfilled. An anti-mechanisation trend among miners is evident, and the level of technical supervision is low. Among improvements recorded at the mines is the introduction of daylight lamps at No.40 mine. These lamps are eventually to be installed in all mines of this field.

The mining settlement of Kok-Yangak has grown considerably since 1951 and new blocks of houses are being continually added. The Kok-Yangak Trust approved the construction plans for the new Kok-Yangak settlement in 1951, since by then the growing population at the mines had outgrown accommodation facilities available at the old settlement. By the autumn of 1951, 1,200 square metres of domestic housing had been handed over to occupiers. In 1952, construction work was further extended and 98 detached houses put up on what was only recently waste land. Some miners have built their own private houses with loans and building materials provided by the Mining Trust. In 1952, loans to individual miners amounted to not less than 250,000 roubles.

Tashkumyr

The Tashkumyr field on the Naryn river is the most recent of the four Kirgizian fields. Its coal is of a "transition" type, but of good quality with a calorific value of over 6,000. Tashkumyr is a product of the Stalin Five-Year Plan. Only 25 years ago coal was transported from the fields on the backs of donkeys; it now claims to be a large and well laid out mining centre. During the past five years, ten thousand square metres of domestic housing, a hospital and a school have been added to cater for the needs of the growing mining population. One complaint about the work of this mine is that the miners tend to underestimate the importance of the work and leadership of their foremen. Consequently, Party cells are called upon to work for the strengthening of the authority of the foremen whose routine demands are to be strictly complied with. Conditions of work at this mine are now improving; its daily output is growing and coal trains are said to leave the station yards almost every two hours.

In conflict with these statements, however, it is declared that output actually decreased last year and that the Party organisation at the mine was to be blamed for this. The slackness of Party organisation was recently demonstrated when a former manager who had been guilty of exaggerating achievements and falsifying output figures was merely sent to a mining academy to brush up his knowledge instead of being severely punished.

Efforts are being made at the "Severnaya" mine to introduce further improvements, although it had already exceeded its planned output in 1952. There are, however, complaints that surveying operations at Tashkumyr have not been vigourously pursued, and for this the inadequate organisation of labour is blamed. Fully qualified and experienced miners are often moved from one pit to another, their locally acquired experience being thus wasted. Rush methods of work (shturmovshchina) are usually adopted at the end of each month to reach monthly production quotas. During these periods of feverish activity more miners are sent underground than necessary and this leads to confusion and a drop in the productivity of individuals. Rush methods can be avoided if primary communist cells are more active in maintaining an even tempo of work throughout the month.

All of the above four coalfields have the advantage of being linked by branch lines with the Fergana railway system. Other prospective fields do not have this advantage. The Dzhergalan field, for instance, in the Terski Ala-Tau east of Przhevalsk, which was prospected in 1928-1930, is 2,300 metres up and only accessible by rough tracks leading from the shores of Issyk Kul lake. Before extraction here can be developed, the roads leading to Przhevalsk and the lake ports must be improved. From there coal could be transhipped to Rybachye rail head and thence to the Chu valley where it is badly needed. At present the Dzhergalan fields are thinly populated; mining is primitive and is confined to catering for small-scale local needs.

Along the southern shores of the Issyk Kul there are also the Sogutinsk coalfields, providing a medium grade of coal. The development of this field would be of considerable importance since Frunze, the capital of the Republic, at present has to import its coal from some distance, and for coal to be brought from across the lake would mean a great economy. In this connection, there has been mention of a railway line skirting the Issyk Kul and thus connecting Rybachye direct with the Dzhergalan and Sogutinsk fields.

There is reference to a new field which is known to exist in the eastern sector of the Osh region. This is visualised as a future base for the development of metallurgy in the Republic. The deposit is alleged to contain hundred of millions of tons of coal, some of which has the high calorific value of 8,500. At present, however, this field is unworkable and will remain so until it can be linked by a permanent line with the existing southern railway system.

TURKMENISTAN

Oil

During the first quarter of 1953 press references to Turkmen oil were on the whole scarce and indirect. But they indicate general progress both in the volume of production and in the application of new drilling methods. All production increases are given in percentages rather than in actual volume.

The 1955 oil production targets announced at the Nineteenth Party Congress were enthusiastically received by the Turkmenneft workers, and reports of expansion are already being published. For instance, the 1952 State plan for the geological survey has been carried out three months ahead of schedule and the net cost cut by 8%. Great emphasis has been laid on the progress in drilling results since the introduction of the "Turbobur" which has increased the speed of boring from 200 - 300 metres in 1940 to 500 - 600 metres during 1952.

Soviet Initiative

References to the Nebit Dag oilfields are frequently accompanied by allusions to the short but eventful history of the Turkmen oil industry. Unsuccessful attempts at deep boring were first made by the management of the Trans-Caspian Railway in 1883-7. It is also affirmed that steps to study the mineral resources of Nebit Dag were made by British "interventionists" during the Civil War. Scientific prospecting was, however, not undertaken until the Soviet regime came into power. Even then there were many setbacks and the wells for a time produced nothing but water. Surveying might indeed have been abandoned but for the insistence of Academician Gubkin who maintained that Nebit Dag was not a limited area for production but part of a whole oil region. His estimates were proved correct during the war when the production of crude oil increased by 70% and that of refined spirit by six times.

Development since 1940

The increase of oil production in Turkmenistan has been far more

rapid than expected. During 1950 more oil was produced than planned under the Fifth Five-Year-Plan and 1951 and 1952 showed further increases. In fact, the amount of production in 1952 exceeded that of 1940 by four times. The future of the Turkmen oil industry is now considered to be bound up with the extension of existing fields by new borings. Of the boring operations planned for the near future, at least one third is to be carried out in entirely new areas. The lead in this expansion is being maintained by the workers of Kumdagneft and Chelekenneft.

Expansion of Nebit Dag

Nebit Dag is now recognised as the centre of the Turkmen oil industry. The rise of this town both as a production centre and as a city has been phenomenal. Fifteen years ago there were only ten or twelve wells in the "Twenty-six Baku Kommissars" field and the absence of roads made the transportation of oil an extremely hazardous operation. There was a shortage of water and of accommodation and an even greater dearth of oil technicians and specialists. By the end of 1950, however, the index for the average daily production of oil in the Nebit Dag field in comparison with before the war had reached 328, and that for the number of wells in operation to 428. As a result of this remarkable development, Nebit Dag rapidly assumed the status of a flourishing modern city. The Party, administrative and research organisations are concentrated in Nebit Dag itself, while the actual work of extraction is located at Vyshka, a settlement which is expanding further and further into the desert. Since 1950 not less than 80,000 square metres of domestic housing has been erected in Nebit Dag and the Dzhebel and Vyshka settlements, and five hundred families fully accommodated. The hospitals at Nebit Dag and Vyshka have been extended to include a dispensary and an isolation ward. The persistent water shortage has been overcome and eight new wells have recently been constructed. During 1953, it is hoped to dispense altogether with the necessity of bringing drinking water all the way from Kazandzhik. The supply of electric current has improved and in February the capacity of the existing Diesel power station was to be increased by 3,500 kilowatts. Gas has been laid on in over one thousand houses in Nebit Dag and Vyzhka, and during 1953 it is intended to make the supply of gas universal. More than 1,500 radio receiving terminals have been installed in private flats.

Greater prosperity is increasing the purchasing power of Turkmenistan's oil workers. This is reflected in the greater turnover in local shops, whose sales in 1952 had increased by over six million roubles over those in 1951. Buying is particularly heavy during periods when long-service gratuities are paid out. The last distribution of these payments began on the 15th December and during a short period after that date three hundred radio receiving sets, four hundred clocks and watches, twenty-five motor cycles and ten pianos had been purchased.

The Turkmen Oil "Technicum" has recently been moved from Krasnovodsk to Nebit Dag and the courses held there are said to have caused a rise in the educational level of the local population. Another factor contributing to this rise is the arrival of large numbers of qualified workers from higher technical schools outside.

Kum Dag

Considerable expansion is also reported at Kum Dag which became an Oblast centre in 1952. Apart from spacious living quarters, Kum Dag now has a club, a cinema and a large school building; gas is laid on in most of the public buildings and is to be brought into use for domestic purposes shortly. Kum Dag boasts a magazine called the "Kum Dag Oilman", the first number of which appeared in February.

Complaints and Criticism

Criticism ranged over the proper employment of boring gangs, the use of the latest methods of oil exploitation, for instance, in the matter of "stratum pressure", and the encouragement given to workers by examining and applying their suggestions for the rationalisation of production processes. In the latter connection, it was maintained that of twenty-three such suggestions made during 1952, only three had been studied and approved. As a result of this, the flow of suggestions had dried up during the fourth quarter of the year. Nevertheless, in January 1953 oil workers had on their own initiative decided to raise the coefficient of well exploitation from "0.888 to 0.910", to resurrect two disused wells, to cut down by 10% the expenditure of materials used in production, and to introduce wherever possible the mechanisation of secondary processes and forms of labour organisation adopted at forward units of the oil industry. A specific complaint was directed by the Ashkhabad railway against the poor work of the supply department of the Turkmenneft Trust. Large quantities of freight addressed to the Trust are delayed in unloading with the result that wagons are held back over

the time limit and large fines have to be paid to the railway. Such delays are quite unnecessary since the Trust sidings are well equipped with facilities for unloading. These include a twenty-five ton crane, two automatic cranes and other mechanical devices which are not being properly utilised.

Shipping on the Amu Darya

Since work began at the head of the new Main Turkmen Canal at Takhia-Tash, the volume of freight carried on the Amu-Darya has greatly increased. This freight includes supplies not only for the canal works, but also for the labour employed on the project. In order to cater for the great increase in shipping, improvements are being carried out to piers, docks, wharves and other port installations at Khodzheili, Takhia-Tash, and Chardzhou. These improvements, although intended as a temporary measure, are likely to remain as a permanent contribution towards the betterment of shipping facilities on this important river artery. Since the increase in shipping is directly connected with the canal works, it has recently been decided that the Sredazgidrostroi, the organisation directly responsible for the work, should control and be responsible for the transportation of building materials. This organisation has in consequence taken over from the regular steamship line five tugs and ten barges as well as the Khodzheili ship repairing yard. New workshops are to be built at Khodzheili in order to undertake the servicing of the steamers on the lower reaches of the Amu-Darya connected with the canal project.

Development of River Ports

Work on the extension of port facilities at Khodzheili, Takhia-Tash and Chardzhou, the three ports most affected by the current increase in the volume of freight, is making good progress. Khodzheili is to be the main repair centre and metal-and wood-working machinery has been arriving there from many parts of the Union. The new workshops were to be opened in February, and personnel, including carpenters, turners and fitters, is being drafted into the town. Takhia-Tash is the main assembly centre. To improve facilities in this respect a yard for the assembly of barges, steamers and motor-vessels is being laid out along the banks of the new feeder canal. In this yard it is planned to assemble during 1953 twelve paddle-steamers and twenty-five barges. Sections of nine barges have already arrived and work has begun on the assembly of two of them. Two cranes of fifteen tons' lifting capacity have already been installed and ten pontoon cranes are shortly expected. The existing six welding units are to be increased to thirty in the near future. From details given about the movements of rolling stock, it is clear that the railway branch line laid from Gidrouzel station to the wharves is already in operation. Work at the wharves is under the supervision of specialists from the Kiev ship-building combine.

Docking facilities and Training of Dockers

The position of Chardzhou at the junction of the Ashkhabad and the Amu-Darya river system has greatly enhanced its importance. It has in fact become the largest transhipment centre used by the builders of the Main Turkmen Canal. A continuous stream of freight is reported to be moving towards Chardzhou both day and night, and this requires a great increase in docking capacity and in the mechanisation of loading and unloading arrangements. Since 1950 forty million roubles have been invested for this purpose and railway and port facilities have been improved to a marked degree. Mention has been made of a new railway station and of a bridge over the railway line. Special mention has been made of the port of Krasnovodsk as a training centre for dockers. Training courses held there include all forms of port duties such as those of stevedores, works superintendents, mechanics and warehousemen. It is believed that these courses will greatly improve the standard of work, especially at smaller ports such as Kerki, Charluk, Shabbaz, Turtkul and Gurlen.

Supply of New Vessels

During 1953 a total of thirty steamers and barges is expected to arrive from Kiev and four motor vessels from Moscow shipbuilders. The Leninskaya Kuznitza Works of Kiev recently despatched to the canal zone seventy railway trucks with sections of barges which, on being assembled, will have a higher carrying capacity than any so far used on the Amu-Darya. On January 10th, it was reported from Takhia-Tash, that the first barges sent by rail had arrived.

The performance of a number of vessels of different kinds has been singled out for praise or criticism. Among those favourably mentioned are the tugs Papanin, Pushkin, Smidovich, Andreev, and Komsomoletz and the motor vessels Byelinski, Goncharov, Herzen, Nekrasov. On the Kara Tau-Takhia-Tash run, the steamers Lenin and General Vatutin are reported to be working efficiently. On the other hand, however, the captain and engineer of the steamer Kuibyshev are said to have failed in their duties in the matter of political educational work among their crew, with the result that during the first half of 1952 forty members of the crew had to be dismissed.

Shortcomings

Shortcomings in shipping on the Amu-Darya have been widely admitted. During 1952, the amount of freight handled fell far short of requirements and of the planned targets. During the first quarter, only 20% of

planned freight deliveries had been carried out; this was attributed to delays in beginning shipment in the navigation season. During the second quarter of the year there was no improvement and the target was only carried out to the extent of 17%. At the beginning of 1953 it was again stated that shipments had begun too late in the navigation season. It is estimated that the plan for 1952 was only executed up to 70% in tonnage and 74.5% in ton-kilometres. As a result, the shipping services failed to deliver to many districts thousands of tons of freight urgently needed for the fulfilment of State plans. Many ships remained idle for long periods and this resulted not only in a loss of freight carriage, but also in the administration having to pay demurrage fees of over half a million roubles. An even larger sum was paid out in compensation to shippers for losses on account of shortages in delivery caused by rough handling or pilfering. It is also alleged that crews have been too hurriedly mustered and that shipping managers did little to promote a higher standard of amenities. Several ships changed their entire crews not less than five times during last year.

KAZAKHSTAN

Railways

In September 1952, Shayakhmetov, the Secretary of the Kazakh Communist Party, outlined the general plan and prospects for the development of Kazakh railways. Apart from some general recommendations for the fuller use of the reserves of existing railways and their capacity, and for stricter adherence to the rules of the safe running of trains, he gave an assurance that during 1953 the Mointy-Chu line and the Akmolinsk-Pavlodar section of the South Siberian railway would be completed and begin to operate regularly. He also mentioned that in 1953 it was planned to start work on the building of the Kungrad-Makat and Guryev-Astrakhan lines and to lay a second track on the Akmolinsk-Kartaly line.

Turksib

During the autumn of 1952, considerable publicity was given by the Press to a campaign for the haulage by single locomotives of heavier freight trains. This campaign is in operation in other parts of the Union (see Uzbekistan: Railways) and is primarily designed as an economy measure.

On the Turksib, the campaign appears to have been initiated in 1952 by the locomotive "brigades" of the Matai section, who achieved the movement of 3,500 trains of which both the load and the speed were above the average. This resulted in the transportation of 2,466,000 tons of freight in excess of planned targets, and continued success on these lines would have resulted in a partial liquidation of arrears in the carrying out of State plans, and also in considerable economy.

Later reports, however, indicated a slackening of the campaign owing partly to severe winter conditions, but also to the unco-operative attitude of the management, who appeared to think that the use of fewer engines would prejudice the effect of their periodical reports, these being based not on ton-kilometre achievements but on locomotive-kilometres. (It has, incidentally, been suggested that even achievements

on this basis were unsatisfactory, since not a single engine driver had so far reached the 500 kilometre daily target).

The management's programme for the movement of heavier trains was limited to two trains daily, one from Semipalatinsk to Tyulkubas, and the other from Alma Ata to Semipalatinsk. Even this was not fully carried out and, in effect, during December only 3 heavy trains were moved in the Zashchitnaya, 23 in the Ayaguz and 27 in the Dzhambul sections. Drivers were obstructed by various means such as frequent stops at station signal points designed to curtail their speed.

This slowing-down of the campaign is deplored by the press, particularly since an announcement that, during 1952, 10,000 heavy trains had been moved over the Turksib held great promise for the future.

Accusations made by locomotive "brigades" of the unco-operative attitude of the management appear to have taken effect, and it is now accepted that the campaign will not succeed without the full co-operation of all departments of the railway. Accordingly, the whole matter has been submitted to a special meeting of engineers and a committee appointed to study the various aspects of the campaign and to adopt practical steps for its furtherance.

During the first quarter of 1953, some improvement was reported, particularly in the Chu-Lugovaya section. The number of heavy trains moved on this section rose from 165 in January to 243 in February, and to 334 in the first 24 days of March. During March, 102 more drivers joined in the campaign and another 12 locomotives were released for other duties.

It is, however, believed that there will be further setbacks in the spring. The track is in poor condition after the winter, and warnings have been issued for the reduction of speed over sections not yet properly repaired.

Large funds have been allotted for the provision of amenities for the railway staff. Rest-houses have been opened at Lugovaya, Kos-Kuduk, Osh-Tobe and Ak Togai stations. Fifteen eight-flat blocks are being constructed at such places as Ayaguz, Matai and Dzhambul. During 1953, the Turksib railway is to have an additional thirteen thousand square metres of domestic housing. Considerable progress has been made in the building of schools for the children of railway employees. There are already 104 schools at important junctions and the larger stations, and these accommodate 43,000 children. New

schools are now being built at Sary Osek, Ayaguz, Zashchitnaya and Kos-Kuduk. The network of trading centres and shops along the line of the Turksib is being greatly extended.

The Akmolinsk-Pavlodar line

Hitherto this district has only been served by a narrow-gauge railway from the Irtysh River to Ekibastuz, which before the Revolution transported coal sold to river steamship companies. The completion of the new trunk-line will open up the great mineral resources of the district. Much progress was made during 1952 including a successful attack on the Eremen Tau range, the building of the bridge over the Irtysh River and the building of a number of railway settlements. In February 1952, railway gang trains were already running and towards the end of the year the railway was opened for limited seasonal use. This year's plan includes an extensive building programme for settlements and stations, particularly those at Pavlodar, Ekibastuz and Eremen Tau.

Mointy-Chu line

The 6th Kazakhstan Communist Party Congress stipulated that this line should be open for traffic in 1953. So far, however, movement is limited to freight and local passenger trains. When the line is running to full capacity long distance trains connecting Sverdlovsk and Alma Ata and Sverdlovsk and Tashkent will pass over the Mointy-Chu section, which will thus provide an additional and shorter link between Central Asia and the Urals. Secondary ballasting has now been done along much of the line and most of the stations have been handed over to the permanent management. The 1952 plan for the erection of domestic housing has been completed and power stations have been built at Myn Aral and Khan Tau.

Guryev-Makat-Kandagach line

There have been some references to the development of the busy station of Shubar Kuduk on the Guryev-Kandagach line. Mention is made of two-storey houses with water and electric light supply and of other amenities such as a radio-diffusion station. This remote locality is now connected with the cultural and industrial centres of the Union and is only twelve hours distant by rail from the oil town of Guryev.

Kos-Kuduk narrow guage line

This branch line is used for the transportation of saksaul from production districts and is well provided with trucks and locomotives. There are however complaints of inefficiency; three trains could be loaded to the main line and brought down at one time with about 600 tons of saksaul fuel but loads are usually limited to 300 tons only. There had consequently been an accumulation of stocks which will not be moved for some time to come. A fuller use by the Ministry of Local Fuels of the existing transport means of this line is therefore strongly recommended.

Urban Development

Reports on the development of cities and generally on municipal matters include statements that plans for new municipal construction have been formulated and that funds are available for the development among others of the cities of Kzyl-Orda, Taldy Kurgan, Dzhambul, Uralsk, Petropavlovsk and Semipalatinsk. Houses containing eight flats each are to be built in Kzyl-Orda, Kustanai and Akmolinsk, an hotel accommodating one hundred guests at Kzyl-Orda as well as public baths in Atbasar, Turkestan, and in the Lozovskoi and Irtysh districts of the Pavlodar region. Power stations are to be opened at Kzyl-Orda and Taldy Kurgan. Existing watermains are to be extended and new ones laid in Aktyubinsk, Semipalatinsk, Petropavlovsk and Chimkent. The sewerage system at Petropavlovsk is to be extended.

Alma Ata

The extent and tempo of construction of dwelling houses and municipal buildings is to be increased in the current year. Among factory and work-shop buildings to be constructed are engineering works, an enamelware factory, a chemical cleaning plant and a furniture factory. New water and sewage mains are to be installed. About two million roubles are to be invested in the development of electric power and a new hydroelectric plant is to come into being. According to Epikterov, Minister of Municipal Affairs in Kazakhstan, 13 houses with eight flats in each are to be erected this year in Alma Ata; a trolley-bus depot is to be completed, and a number of new trolley-buses and electric trains are to be made available for the population. In the western sector of Alma Ata public baths to accommodate a hundred users at a time are to be built.

In the past two years a total of 230 million roubles has been spent on construction, 88 million having been spent on domestic housing. In the current year, 180 million roubles have been earmarked for building. New public buildings are to include three technical colleges, a teachers' institute for women and two cinemas. 49,000 square metres of domestic housing is to be built this year.

Balkhash

Balkhash municipal planners are busy with extension schemes. Twenty million roubles were assigned for the development of this key city during 1952 and this amount has now been increased to 28 million.

Dzhambul

This regional centre is expanding. During the first years of the Fifth Five-Year Plan, two seven-year schools and two middle schools, five shops and 100 dwelling houses were completed. Work on the construction of a new building to accommodate a veterinary technical institute has been started. The area occupied by the old city has grown rapidly and has now reached the station buildings and the Sugar and Superphosphate Works. Five and a half thousand square metres of streets have been asphalted. The central part of the city and Pushkin Street have been macadamised and the Abai and Kaganovidch Streets paved. A new House of the Soviets is to be erected in the centre of the city, and public baths and other municipal and dwelling houses are to be built. Many citizens will at last be able to move into modern flats.

Guryev

Still greater prosperity is confidently predicted for the oil and fishing town of Guryev. The town is divided into two parts by the Ural river, and its administrative, regional and city buildings, most of its schools, its regional library, a teachers' college, hospital and shopping district are on the right bank of the river. The local branch of the Kazakh Academy of Sciences and the river and sea port installations are also on the right bank. Industrial Guryev is on the left bank and is connected with Guryev proper by a bridge. This is the site of the new town, which incorporates the Petrokski Engineering Works, the workhops of the Guryev section of the railway, the Meat and Fish Combine, and the power station. The industries of Guryev are expanding and the city is continuously growing. A railway terminus is to be built shortly as well as a House of the Soviets, new bridges across the river and further port installations. The banks of the river are to be strengthened by concrete work. To avoid haphazard development, a general plan of urban construction projects is to be worked out. Under the new Five-Year Plan, a new railway will connect Guryev with Astrakhan. An afforestation belt passes near Guryev and will add to the amenities of the city.

Eremen Tau

Eremen Tau is one of the most recent settlements of Kazakhstan. It is so recent that what is known as "Old Eremen Tau" will shortly celebrate its fifth anniversary. A typical mushroom settlement so far, it is destined for rapid development since it is on the new Akmolinsk-Pavlodar section of the South Siberian Railway and constitutes an important stage on this route. During the last two and a half years much has been done to improve the settlement's living conditions and it now has a "ten-year" school, as well as a boarding school for children of the railwaymen liv-

ing in temporary hutments at small stations along the line. It has a "House of Culture" which in its architecture is believed to surpass all other similar buildings in the Akmolinsk region. Difficulties in building and in constructing the permanent railway track in the Eremen Tau district are mostly due to the rocky nature of its soil which necessitates blasting.

Leninogorsk

A February report shows that this town is rapidly growing and especially its suburbs. Last year 12,000 square metres of living and dwelling space were added to accommodate workers in its mining suburb.

Kulsary

Natural gas is now used for the heating of buildings in this oil town. It is also used in the brick kilns and the "Engineering Base Workshop". Kulsary is thus the second settlement of the Emba oil fields to be supplied with gas, the first having been Kashkara. Since oil was first discovered at Kulsary at the beginning of the Third Five-Year Plan, this settlement has rapidly developed. During the past two years over 40 houses have been erected. Considerable efforts are being made to provide additional amenities for the population, and a park is being laid out - a considerable achievement in view of local soil conditions.

Tas Buget

Work on the construction of the Kzyl-Orda dam brought this settlement into being to accommodate workers. Although not yet to be found on any map, it has two schools, a club, a library and a stadium.

Karaganda District

During January, "Saranstroi", the Saran local Building Trust, handed over for occupation 4,510 square metres of domestic housing. Buildings comprising 12 and 24 flats have been completed, and 53 families of miners have moved in from colliery No. 101. At Fedorovka six houses for miners working the open cuttings have been newly occupied. In Novy Maikuduk two houses of eight flats each have been completed for men working at No. 35 colliery, which supplies coking coal to the Magnitogorsk metallurgical works. A tram-line now connects Maikuduk with Karaganda. At Maikuduk settlement, a hospital and an hotel to accommodate one hundred guests have also been completed.

Ekibastuz

The new railway settlement of Ekibastuz only came into being after the last local elections, but it is already one of the busiest settlements of the Irtysh region. Recently, two eight-flat and 15 two-flat apartment houses have been erected. Passenger trains arrive at this station daily, as well as freight trains for the new construction site.

Tekeli

This is one of the newest cities of Kazakhstan. Last year a mechanized bakery, an hotel, a stadium, 27 large houses, a crèche to release more mothers for work, and a new middle school were added to its amenities. In 1953 the scope of construction is to be extended.

Dzhezkazgan

The construction Trust of the Kazakh Copper Industries is responsible for the implementing of building projects at Dzhezkazgan, a new industrial centre of Kazakhstan. This Trust, in spite of an abundance of labour facilities and mechanical equipment and an efficient supply base, is not working according to plan, and the projected 13,000 additional square metres of domestic housing have not been completed. hospital building, the Vesovaya station building and the main administative premises of Dzhezkazgan have been under construction for five years but are still incomplete. Not a single square metre of road surface has been asphalted for the past five years. The slow tempo of work of this Trust has resulted in a considerable increase in building costs and its operational losses for 1952 alone were seven million roubles. Only 50 - 60% of whitewashing, painting and stucco work is mechanized and only 80% of excavation work. A quarter of the available cranes belonging to the Trust are not in use and materials are often carried to upper floors by hand. Bulldozers, scrapers, etc. are only partially utilised. Costs of materials are high and the cost of 1,000 bricks exceeds estimates by 46 roubles. The stock-accounting methods of the Trust are crude and the value of unused stocks in store runs to millions of roubles. Buildings supposed to be finally completed are handed over for occupation in poor condition. Even the "fine" houses in the Sadovaya Street of Dzhezkazgan have been left unfinished. Access to them from the street is still blocked as approaches have not been built, and the streets have been dug up on both sides for water-mains and sewage trenches. These houses have no water supply or drainage.

The Academy of Sciences

The Kazakh Academy of Sciences was created six years ago and has now become the established cultural centre of the republic; it exercises considerable influence on the development of science, literature and political thought. It comprises twenty institutes and a number of independent scientific research centres supplied with up-to-date scientific equipment. Since the foundation of the Academy four hundred and sixty persons have obtained their degrees, and by 1953 the Academy contained eight hundred associates.

The main task of the Academy is that of assisting the great current projects of the Soviet regime. Particular attention, for instance, is paid to the Volga-Ural Canal and to problems relating to the exploitation for agricultural purposes of the northern Caspian regions where an expedition initiated by the Academy is at present at work. Other Academy specialists are at work in Southern Kazakhstan on problems of hydro-electric resources. The Academy is also actively interested in the recent move to introduce universal polytechnic education into middle schools.

A relatively new feature in the activities of the Academy is the plan to achieve a closer connection between scientists of the Academy and the experimental staff working in production, transport etc. To assist this movement the Scientific Council of the Academy has recently co-opted the chief engineer of the Alma Ata Heavy Machinery Works and the chief agronomist of the Alma Ata M.T.S. Similarly the Mining Institute of the Academy has established regular contact with engineering and technical personnel in Dzhezkazgan. This is with the object of accelerating the introduction of new scientific methods and inventions worked out by members of the Academy and of making a better study of all resources in industries with a view to increasing productivity.

While progress on the practical scientific side is generally considered to be satisfactory, the Institute of History, Ethnography and Archaeology comes in for a great deal of Press criticism. This institute is intended to take the lead in the initiation of the study of Kazakhstan's past. The main task of the Institute is to concentrate its research activities on the history of the Kazakh S.S.R. and to carry out a relentless war against all manifestations of bourgeois ideology in historical research. The Central Committee of the Kazakh Communist Party has issued a clear directive on this subject emphasizing the need to combat all attempts to falsify history or undermine the Kazakh people's friendship with the

Great Russian people. The directive attached particular importance to the study of the nationalist movements in Kazakhstan in the 18th and 19th centuries and emphasized the need to differentiate more clearly between popular and reactionary feudal-monarchical movements.

In spite of this directive, during the past two years not a single scientific paper has been published by the Institute which devoted sufficient weight to these fundamental questions. There has been no research into the penetration of capitalism into pre-revolutionary Kazakhstan, or the revolutionary movement which followed. The foundation and evolution of a "Kazakh Socialist Nation" has apparently been ignored, and in the past there has been a non-Marxist approach to the question whether the incorporation of Kazkhstan with the Russian Empire was a progressive event. Some members of the Institute have displayed a tendency to claim as a popular liberation movement the reactionary feudal-monarchical movement of Kenesary Kasimov (1837 - 1847).

A notable shortcoming in the routine work of the Institute is the absence of discussion of historical subjects before the publication of papers. Such discussion might have eliminated the faulty approach in such works as Kabirov's treatise on "The Migration of the Ili Uigurs" which praised the feudal Khanate and failed to disclose the imperialist policy of the British colonisers of the last century, who aimed at the subjugation of Eastern Turkestan. This book has now been withdrawn and is to be rewritten in the light of the criticisms made after its first publication. Another historian, T. Shoinbaev, is criticised for representing the 1857 insurrection in the Syr Darya region as a national liberation movement and for idealising its leader, Nurmuhamedov. The latter was in reality a typical representative of the reactionary feudal aristocracy; his movement was directed against Russia and thus tended to damage Kazakh-Russian friendship.

Some information is available about the first volume of the history of the Kazakh S.S.R. which is now ready for publication. , This history includes the pre-revolutionary period and pays particular attention to the progressive results which followed the incorporation of Kazakhstan into the Russian Empire and to the historical origins of the friendship between the Russian and the Kazakh peoples. Stress is laid upon the "voluntary attachment" of Kazakhstan to Russia, a process resisted by Kazakh sultans and Khans who did all in their power to estrange the two peoples. The history emphasizes the beneficial influence of Russia's advanced economy and culture on the social relations and culture of the Kazkh people, and gives great prominence to the growth of the revolutionary movement in Kazakhstan under the influence of the Russian working class. The history is divided up into definite historical periods in line with Marxist teaching.

The archaeological department of the Institute has been active in research in the Mangashlyk area, the Ust Urt plateau and the western shores of the Aral Sea, principally along the ancient caravan routes from Khorezm into the Ural-Volga area. The examples of art and architecture relating to the second half of the 19th century (sic), including tombstones and decorative motifs, have been studied together with earlier relics of the 17th and 18th centuries. It is expected that the results of this work will provide material for the further development of a national architecture. Here too, however, there have been serious aberrations: Professor Margullan was criticised for the errors contained in his dissertation on the epic inheritance of the Kazakh past. This, it was alleged, had been written from the bourgeois cosmopolitan angle of the Vesselovsky school.

The Institute of Literature and Language has been subjected to some criticism for its stubborn "Marxism", and the Director, Ishakov, has been warned that unless he completely reorganises the work of his Institute in line with the teaching of Stalin's linguistics, he will be held personally responsible. There was also criticism of the work of the Dungan-Uigur department of this Institute, which has been improved accordingly. The work of the department has been extended and qualified specialists have been brought from Moscow. As a result of these increased activities the compilation of an Uigur-Russian and Russian-Uigur dictionary is nearly complete.

Literature

Considerable attention has recently been paid to the subject of literature. Comments have principally referred to the production and sales of political literature and to modern trends in criticism of both the classical and Soviet writers of Kazakhstan.

Political literature is being published in larger and larger quantities. Lenin's work first began to be published in the Kazakh language in 1923 and since then the printing and circulation of his works have been growing. Nineteen volumes have now been published and the circulation has reached two million copies. The translation has been done by the Kazakh department of the Institute of Marx, Engels and Lenin. Book sales in rural districts during 1942 fell short of anticipation. It was expected that one million's roubles worth of books would be sold, but in fact sales have not amounted to as much as half a million roubles. This falling off is attributed to the inferior selection of books sent to rural areas. It has been announced that as from January 1953 that the Kazakhstan Almanac is to become a monthly magazine.

A great deal of fault has been found in the tone of criticism and comment on the Kazakh classics. Existing commentaries on the work of the Kazakh poet Dzhambul have been found to be mistaken and tendentious. The current editions of his works are now considered to be spurious and to contain many bourgeois nationalist interpolations and falsifications. Some of the songs included in these editions could not have been composed by Dzhambul as they praise the greatest enemies of the Kazakh people. The 1946 Russian edition of Dzhambul's works has an introduction in which an attempt is made to draw an erroneous literary parallel between Dzhambul and Mayakovsky, and also between Dzhambul and Gorki. The same edition maintains that Dzhambul's personality and ideas were purely intuitive and had little to do with class-consciousness. The 1946 Kazakh edition is scarcely better: the commentary on individual poems contained favourable references to such obnoxious characters as Ablai Khan, Kenesary and Shortambai.

There have been many complaints of the low level of literary criticism of contemporary and recent writing. Such criticism is often coloured by considerations of friendship rather than objectivity; particular faults noted were the tendency to idealise certain reactionary Khans and their court poets, and to undervalue the great progressive significance

of the incorporation of Kazakhstan into the Russian Empire and the importance of the sacred friendship between the Kazakh and the Russian peoples. In a new edition of his novel Abai, Auezov has continued to idealise the feudal system of the past, and to minimise the class contradictions which existed in the pre-revolutionary "aul".

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The area covered in this Review embraces the five S.S.R. of Uzbekistan, Tadzhikistan, Kirgizia, Turkmenistan and Kazakhstan. According to Soviet classification "Central Asia" (Srednyaya Aziya) comprises only the first four of these, Kazakhstan being regarded as a separate area.

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CENTRAL ASIAN RESEARCH CENTRE

The Central Asian Research Centre has been formed for the purpose of research into material and cultural developments in Soviet Central Asia and Kazakhstan.

The results of the Centre's research are contained in a quarterly periodical entitled *Central Asian Review*, and in special papers on linguistic and other subjects relating to Central Asia.

The Director of the Centre is Lt. Colonel G. E. Wheeler, C.I.E., C.B.E., F.R.G.S. The general research is conducted by Mr. Robert Smith, Graduate and sometime Lecturer of Moscow University, and formerly Assistant Lecturer in Russian Philology and Literature at King's College, London. Linguistic research is conducted by Dr. Stefan Wurm, Lecturer in Altaic Languages at the University of Vienna.

All enquiries should be addressed to :

The Director,

Central Asian Research Centre,

66[B] King's Road,

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CENTRAL ASIAN REVIEW

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The CENTRAL ASIAN REVIEW is published quarterly by the Central Asian Research Centre and is edited by the Director, Lt. Colonel G.E. Wheeler. It aims at presenting a coherent and objective picture of current political, social and material developments in the five Soviet Socialist Republics of Uzbekistan, Tadzhikistan, Kirgizia, Turkmenistan and Kazakhstan as they are reflected in Soviet publications.

The selection of material is designed to represent positive achievements and shortcomings in the same proportion and with the same degree of emphasis as they are represented in the Soviet press and official publications. No attempt is made to evaluate the accuracy of Soviet reporting, but explanation and background material are added where these seem to be necessary.

The Review is normally divided into six sections, one for each Republic and one containing articles of a more general scope. Each of the five sections dealing with the Republics contains material arranged under one or more of the following headings: Agriculture, Industry, Communications, Public Works and Political and Cultural Affairs. Subjects are only treated when a sufficient amount of significant material is available.

The spelling of place names corresponds in general with the system followed in Phillips Record Atlas (1952 Edition), namely, an approximate transliteration from the original Russian used in Soviet maps.

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All enquiries should be addressed to: The Director, Central Asian Research Centre, 66B King's Road, LONDON S.W.3.

MANPOWER: ITS SELECTION, ORGANISATION AND PERFORMANCE SEEN IN RELATION TO EFFICIENCY AND PRODUCTIVITY

In this and subsequent issues an attempt will be made to collate the information provided by the Central Asian Press on the subject of manpower. The present article consists of a brief general introduction to the whole subject, together with an account of the training and organisation of political personnel, and of personnel and labour in the collective farms.

There is no exact equivalent of the English word "manpower" in modern Soviet language. In Soviet writing on what would be regarded in the West as the subject of manpower, the word "kadry" (cadres) is generally used. Strictly speaking, this word refers to trained and leading personnel: in the Soviet Encyclopaedia of 1937 it is shown to be an abbreviation of the expression "cadres of the builders of socialism" and defined as "people who have mastered the technique of their work". But its meaning is now extended to all those workers who could be trained for any form of specialised work or organised for specific tasks. In addition to political or Party cadres, one of the most frequent uses, there are references to "cadres" in every profession, including technical occupations of every description, science, farming and teaching. The expression "rabochiye kadry", "labour cadres", is also used.

The degree of progress made in the organisation and application of manpower in Central Asia is difficult to determine from references to the subject in the current press. References to the importance of manpower, to efforts made to improve its use and strength, and to the many difficulties and shortcomings encountered are indeed frequent, but it is treated much less specifically than such technical subjects as cotton cultivation in Uzbekistan, the problems of grain and beetroot cultivation in Kazakhstan and of horse-breeding in Kirgizia. Although the economic development of Central Asia is generally admitted to be dependent on the provision and correct use of manpower, particularly in the matter of mechanical aids in industry and agriculture, the real relation in which its performance stands to production is to some extent obscured by the use of percentage statistics and by the accounts of Stakhanovite achievements, which greatly exceed the prevailing norm of production. Moreover, the positive results of the sustained efforts to improve labour organisation and the mass of detailed information about new rationalisation methods are offset, and even overshadowed, by the practice of self-criticism, which involves the vivid and sometimes humorous presentation of the negative aspects of inefficiency, maladministration and even corruption.

Efforts to improve the technical, administrative and political efficiency

of higher personnel and the organisation of labour are constantly maintained throughout the five republics of Central Asia and Kazakhstan. These efforts are usually intensified in the wake of unpleasant disclosures of maladministration and corruption and they are subject to modification to suit the specific economic and cultural level of each of the republics. Thus, in Uzbekistan, the greatest need is for executives and technicians for the cotton estates, while in Kazakhstan the emphasis is on the provision of personnel for the industrial and mining concerns. In Kirgizia and Turkmenistan, where the level of culture is low, the need is greater than in Uzbekistan and Tadzhikistan, with their older national heritage, for extraneous aid in the matter of technicians of a higher calibre. In Kazakhstan, whose geophysical conditions approximate to those of the Siberian hinterland, the provision of trained personnel is more a Russian than a Kazakh problem, since it merely involves the mechanical transfer and infiltration of Russians from Siberia.

In spite of the cultural backwardness of Kirgizia, determined and to some extent successful efforts seem to have been made there to increase the part played in Party and economic organisations by Kirgiz natives. In December 1952, the 9th Full Session of the Party Central Committee disclosed numerous errors in the training and posting of personnel, and decided on stern measures against the prevailing practice of nepotism. April reports show that during the past nine months over a thousand young men were promoted on merit to responsible posts in Party, State and economic organisations, and that of these 663 were Kirgiz natives. At the same time it was emphasised that this greater infusion of native blood was calculated to improve the quality of existing establishments by giving them a better understanding of local conditions. The standard among the higher grades of Party personnel has been raised, and it is now stated that of those recently promoted 40% had university diplomas, or had had some university training. At the same time, it was pointed out that the representation of native Kirgiz was still too low; the number of Kirgiz employed in industries and the health services remains negligible, particularly as regards women.

It is in the selection of individuals for, and their promotion to, higher technical and administrative posts that the greatest difficulty is encountered. Both have to be based on a combination of political integrity and administrative and technical ability, and such combinations are admitted to be rare. The number of mistakes made in appointments can be gauged by the frequency with which changes are made. These changes, and the devices resorted to by incompetent officials to gain favour, are the subject of constant criticism and sometimes of satirical and humorous treatment. A typical example of the latter appeared in the "Literaturnaya Gazeta" of 20th June. This was an extract from a novel entitled "A Glass of Water" which described the fictitious, but probably typical, case of an official who had been transferred from one post to another within a short period. In his last post, that of manager of a Social Services Organisation, he decided to attract the favourable attention of his superiors by establishing a record of achievement in the pressing of trousers. His target was the pressing of a thousand pairs by a single operative in one day, and to achieve this he had to collect trousers over a period without returning them to their owners. In the event, the

target could only be achieved by deliberately creasing many pairs of trousers as soon as they were ironed, and then having them ironed again. Even then the total was short and had to be made up by the manager and his assistants removing their own trousers.

There have been many real cases of fraud and mismanagement which reflect adversely on the integrity of Party cadres, as well as on the ineptitude of managerial appointments. In March last, for instance, the operations of the Kazakhstan Artel "Metallist" were ruthlessly exposed. This artel had been controlled by a technical adviser who had a ten-year prison record for offences against State property, and the presiding chairman was discovered to be a "morally decrepit" person. In this case, thefts, embezzlements, losses from defective production, premiums paid to the Artel for bogus inventions, and for entertainment which was never given, amounted to hundreds of thousands of roubles. To these losses would later have to be added losses incurred by the writing off of stocks which had never existed. In reporting the details of this case, the Press came to the conclusion that whether or not the secretary of the Town Party Committee or the chairman of the Town Executive Committee were aware of these abuses, they were the direct result of the existing methods of selecting and appointing personnel to the Trust which supervised the "Metallist" concern.

One instance has been quoted where a whole city was alleged to be rotten with corruption. In the industrial city of Leninabad (Tadzhikistan) twenty-one directors of industrial plants have been replaced in the course of the past twenty years, and in the Fruit-Preserving Combines, managers and responsible workers are dismissed annually as a matter of course. For motives which are evidently ulterior, the Town Committee does not concern itself with the promotion of younger workers; it has done nothing to create a pool of capable junior operators and little to train the younger generation for their future responsibilities. Again, the Leninabad Silk Combine for a long time sustained a good reputation for high average production and efficiency. It is now admitted that the high statistics were only a facade which concealed low quality and an absence of effort to lower production costs. At the same time, a "soulless", perfunctory and bureaucratic attitude prevailed towards the cultural and daily needs of the workers.

Another instance of the difficulties encountered by the Soviet authorities in their struggle against defective and dishonest management can be found in a disclosure published by Pravda Vostoka of 3rd January 1953. Over a considerable period achievement results on an afforestation project in Uzbekistan had been falsified in a way which borders on the fantastic. Eventually, the auditing of the accounts of this project showed that from ten to sixteen hectares of plantation were missing from each square of the forestry plan. Further investigations showed that of the total area of cultivated forest, 1,665 hectares existed only in the imagination of the project management. False entries of expenditure on seeds, fuel and mythical labour were supported in the accounts by forged vouchers. On the completion of initial planting, a further cycle

of expenses on irrigation, cultivation, weeding, etc., was duly entered and supported by vouchers and balance sheets. The chain of maladministration and dishonesty involved in this gigantic swindle was recognised as having been extensive.

As already indicated in the beginning of this introduction, the fact that the limelight of publicity is cast more on shortcomings than on positive achievements makes it difficult to assess how far the Soviet authorities are making headway against the shortage of efficient and honest personnel with which they are still confronted. That headway is being made can hardly be doubted; and there is certainly no evidence of any abatement on the part of the authorities to improve matters by every means in their power. On the other hand, the Soviet press seems to assume that all would be well if it were not for the shortcomings of individuals: the degree to which behaviour is motivated by circumstances is seldom, if ever, touched upon.

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II. MANPOWER AND THE PARTY ORGANISATIONS

As elsewhere in the Soviet Union, political penetration of all forms of life and activity in Central Asia is extensive and sustained. So far as efficiency and productivity are concerned, the essence of Soviet theory is that the ideal worker of every grade is one in whom right political thinking and practical ability are combined. The rarity of such a combination is constantly deplored, and the titanic efforts needed to induce and develop it are everywhere emphasised. Although it would be an exaggeration to say that militant ideological conviction is indispensable in all, and particularly higher, technical posts, it remains the ideal condition. It is noteworthy that almost all the shortcomings in the various fields of industry and agriculture are laid at the door of the Party cells, or district and regional committees, who are frequently accused of negligence, "formalism", or of a bureaucratic approach to political and economic matters.

The somewhat gloomy picture which the current press provides of the organisation and work of political personnel must be partly attributed to the prevailing technique of self-criticism as the most potent means of stimulation to further efforts. Although the ideal combination of political theory and practical ability is still constantly stressed, there are frequent references to "formalism", by which is meant a facade of political rectitude without any practical or professional knowledge behind it. At the same time, some district committees, for instance, that of Kyzyl-Arvat, are criticised for giving their entire attention to petty current problems and the needs of their districts, and for neglecting the need for regular discussion on problems of higher political and economic import. Such neglect is said to be particularly evident in centres where a surplus of intellectuals might be expected, whose services could be used for the vitally necessary task of political uplift in rural centres, which, in

Central Asia, are considered to be of greater importance than industrial regions to the economy of the Union.

What is difficult to derive from the current Central Asian Press is any concrete evidence of steady progress in the matter of political organisation and personnel. That this is on the way can perhaps be inferred from the striking figures of increased school attendance: for instance, it is anticipated that during 1953 there will be an increase in the Tashkent region of 23,000 Uzbeks attending school, and that this figure will include 13,000 girls.

Selection of Full Party Members and "Apparat" Officials

The selection of candidates for full Party membership is sometimes criticised. A recent report from the city of Kurgan Tyube (a large cotton-ginning centre in the Vakhsh valley of Tadzhikistan) stated that of 133 candidates aspiring to become full Party members, 118 had exceeded the prescribed probationary period, that 75 had been candidates for over five years, and 21 since 1943. An instance of the faulty selection of Party officials was given at a recent Leninsk conference (Editorial note: From the context, this seems to refer to a town in Kirgizia), when it was reported that, during 1952, out of 19 secretaries of Party organs, 14 had been replaced. Changes among kolkhoz "chairmen" are found to be far too frequent. The Chairman of the "Kalinin" kolkhoz in Turkmenistan was changed three times in one year, and this was said to be due to the purely perfunctory method of selection. This perfunctoriness is thought to be particularly dangerous in the case of women, who are often appointed to administrative posts without any previous experience. This fact makes the need for prolonged interviews and examinations all the greater.

District and Regional Committees

Constant emphasis is laid on the potential influence of regional and district committees on the efficiency of industrial and agricultural employees. Castigation of members of such committees is frequent and vigorous: members of the Tashauz regional committee were recently stigmatised as "soulless jacks-in-office" (chinovniks) who approached agricultural problems in a purely bureaucratic way. On the surface, their activities appeared fruitful and of great importance: there were frequent committee sessions, and numerous resolutions were passed after prolonged deliberation. But year after year the Tashauz region lagged behind in economic achievements, in animal husbandry, in wheat deliveries and so on. The busy inefficiency of this committee was evidently contagious: and it was reported that on a certain section of the Ashkhabad railway, while there was growing up an atmosphere of that "mutual aid" which the anarchist Kropotkin had found to be a factor of evolution there was a return to the practice of "mutual amnesty" for sins committed in the performance of daily duties. All this was attributed to the faulty selection of committee members.

Training and Propaganda

The training carried out by Party organisations consists in the higher political instruction of Party members, the inculcation of political principles among technical employees of all grades, and rural uplift among the peasant population. The main medium of instruction appears to be the lecture, and reports on the effectiveness of this medium vary from accounts of ambitious programmes strikingly fulfilled to criticisms of incompetent lecturers and accounts of indifference and dwindling attendance. In Kazakhstan there is a Society for the Propagation of Political and Scientific Knowledge which has on its books a total of 12,000 members. In the first four months of 1953, lecturers had delivered 11,000 lectures, of which 8,000 were devoted to themes discussed at the 19th Party Congress and to Stalin's "Economic Problems of Socialism in the U.S.S.R." Elsewhere reports were less favourable: the Kashka-Darya oblast of Uzbekistan was singled out as an area where Party training was at a particularly low level. Out of 68 political training centres in the Guzar district, there were 66 cases of interruption of regular studies. Many lecturers appeared before their audiences without having prepared their subjects and their so-called lectures mostly consisted of stock questions and answers, a method thought to be out of keeping with the importance of political instruction.

Compared with last year, there has been a notable falling-off in the number of anti-religious lectures delivered. In Kazakhstan, the Scientific-Atheistic Section of the Society for the Propagation of Political and Scientific Knowledge have so far delivered only half the number of lectures delivered in the same period last year. In the district of Tashkent in Uzbekistan, only 78 lectures on anti-religious subjects were delivered out of a planned total of 600. Such lectures as were delivered were merely a réchauffé of old material and no new subjects had been introduced. At the same time, such valuable subjects as "the Origin of Islam and its Reactionary Character", "Superstitions and how to Overcome Them" and "the Class Essence of Christianity" had been completely dropped from the curriculum. The practice hitherto observed of delivering lectures on scientific atheism on days of religious holidays had been discontinued. In April, Moscow drew attention to the partial falling-off of anti-religious work, but although various defects had been enumerated, there has so far been no mention of a more vigorous approach. It has, however, been emphasised that in spite of this apparent lapse, the Party, through its primary cells and the Komsomol, is still pursuing its dynamic onslaught on feudal and religious survivals, which are regarded as an obstacle to progress in factory and field, and particularly to the efficient running of kolkhoz economy.

Other mediums of instruction are study circles and correspondence courses. These are regarded as independent study and therefore as a concession. They are particularly encouraged among the higher intellectual social groups such as teachers, doctors, engineers, agronomists and scientists, who are reported to display serious shortcomings in the matter of political education. As an instance of this, it was reported that in the regional Cotton Board of the Department of Agriculture in Osh there was not a single student of Marxist

theory. This year, about 400 members of the Soviet intelligentsia living in Osh (Kirgizia) are to study the fundamentals of Marxism-Leninism. 360 have enrolled in a study circle concerned with the history of the Party, political economy and philosophy, and 50 have joined correspondence courses.

One of the most important tasks of rural uplift is considered to be the inculcation of a higher standard of labour discipline. Local Party "Aktivs" seem to be incapable of bringing into the fields all the available population and the Fergana and Bukhara regions have been particularly mentioned in this connection. Rural uplift includes the establishment and maintenance of reading rooms, clubs and libraries, intended not only as an aid to political education, but also to the technical training of kolkhoz workers. Here again, however, a uniformly high standard has not been maintained: in the Khorezm oblast of Uzbekistan, many libraries have been closed in the Gurlen and Urgench districts. In the former district, out of 14 clubs previously existing, only six remained, and one club, which had formerly been considered as one of the best, has recently been closed and its concert hall turned over to the storage of cotton seed.

The Komsomol

Generally speaking, the Komsomol is subjected to far less criticism than other organisations. High hopes are entertained of the part to be played by the Komsomol in Kazakhstan in the strengthening of the morale of M.T.S. and M.Zh.S (mechanised animal husbandry stations) and in replenishing their ranks, which have become seriously depleted. Similarly, the Komsomol is to take an active part in improving welfare conditions in the villages and generally in rural uplift. There is no question of any shortage of Komsomol personnel in this Republic, where there are said to be 22,000 Komsomol members with full or partial University training. The Kazakhstan Komsomol includes 20,000 engineers, technicians and teachers, as well as more than 16,000 girls. More than 70,000 have been members for over ten years. Elsewhere, however, shortcomings have been noted: feudal survivals in the local Komsomol organisations were recently disclosed by the Leninabad City Council; under-age girl members have been allowed to marry, even though they belonged to communist families. There were also serious cases of indiscipline among Komsomol youths, many of whom were quite uninterested in organisational and administrative work. Many members failed to pay their fees and others had left the district without leaving information of their whereabouts.

Women

Considerable prominence is given in the Press to the need for increasing the part played by women in the political and economic life of the Central Asian republics. Among all the references to this subject, two facts stand out: the extensive employment of women in agricultural manual labour; and the very small number of women holding important administrative or

technical posts. The quotation of certain facts and figures speaks for itself: out of 4,220 students in the technical training institutes connected with the cotton industry of Uzbekistan, only 85 are girls; in one oblast of Tadzhikistan, there is not a single woman among medical workers, mechanics, agronomists or zoologists, and out of 116 cotton "brigadirs" (gang-foremen), only one is a woman; and not a single woman has attained the status of kolkhoz chairman.

The main reason for this shortcoming is admitted to be the survival of the traditional "feudal" attitude towards women which predominates among the native population. Although women have shown themselves to be expert in the matter of cotton and other plant cultivation and have become members of regional and district Soviets, their cultural uplift is largely ignored. There is an absence of any intensive effort to arrange for their participation in lectures, discussions, club activities and sporting societies, and there is a marked disinclination to promote them to responsible posts in industry, on kolkhoz estates or in Party organisations. The Fergana, Kaganovich, Kuvasai and Buvaidin districts are quoted as having failed to recommend for promotion a single woman candidate during the whole of 1952.

A much bolder attitude is now advocated in the employment and promotion of women to responsible posts, particularly in the Komsomol. The struggle is to be intensified against feudal customs, a serious example of which is found to be polygamy. A case recently came to light where the chairman of a village Soviet was reprimanded for having two wives, but who did not hesitate to marry for the third time while continuing to flaunt his communist party ticket.

As in the case of men, the Party political training of women is generally criticised as being too abstract and removed from the realities of life. There is a tendency to fall back on the circulation of orders as a substitute for human interest in individual character and ability.

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III. MANPOWER AND COLLECTIVE FARMING

Manpower on the Collective Farms embraces four categories of personnel: the management, specialists or agronomists, the personnel of the M.T.S. (Machine and Tractor Stations), and the peasant farmers (Dekhany). It should be noted that the peasant farmers are not technically classified as "Kadry", except in so far as they may provide personnel for employment as "brigadirs" and foremen of "Zvenya", and as tractor-drivers or mechanics.

The management

The great increase in mechanisation, and consequently of land under cultivation, the resulting growth in the productivity of the kolkhozes, and

the policy of amalgamating kolkhoz estates require a much higher degree of administrative and technical ability than has hitherto been found in the average kolkhoz manager. The qualifications needed in the manager, or "chairman" (predsedatel), as he is always called, of a large kolkhoz estate include education, experience in administration, a practical knowledge of farming, a specialised training in agricultural methods and a political outlook in line with the most recent Party policy. Every effort is evidently being made to create an élite of persons with such qualifications, and there seems to be a tendency to select them from the ranks of practising agronomists, and by the specialised and intensified training of the more promising managers and Party officials working in the kolkhozes.

An indication of the expansion caused by mechanisation can be found in the report that by the autumn of 1952, excavating machinery of various kinds in Uzbekistan alone was capable of moving 600,000 cubic metres of soil daily, a task which would previously have required 400,000 work-days. This, as well as other factors, has resulted in a great increase in the so-called "indivisible funds" of the kolkhozes. Contributions to these funds in Uzbekistan during these three years 1948-51 are given as 3,258,000,000 roubles, that for 1951 amounting to 1,200,000,000 roubles. But with the present low average of educational and professional ability among kolkhoz managers, only a small proportion of these funds can be effectively used.

In 1948, only 1.8% of kolkhoz managers in Uzbekistan had had a university or middle school education. By 1951, the total had risen to 20%, but in the Samarkand oblast only about 10% of managers could be said to have had a systematic training in agriculture. A large proportion of managers, therefore, have not sufficient education or training to utilise existing capital funds to the best advantage. Only insignificant sums are expended on electrification and other progressive projects designed to increase productivity. Instead, indivisible funds are often needlessly squandered, and there are many cases of infringement of the kolkhoz Artel Articles of Association, particular mention being made of the Kashka-Darya, Kara-Kalpak, Yangi Yul and Tashkent oblasts.

The large number of cases of mismanagement and misappropriation resulting in loss reported from all five republics are attributed in general to inefficiency in personnel, which in its turn offers a loophole for corruption and embezzlement. It is emphasised again and again that the expansion and increased complication of kolkhoz affairs have completely outstripped the provision of competent personnel, particularly in accountancy. In the "Stalin" kolkhoz of the Chinabad (Uzbekistan) district, considerable funds of cash completely disappeared and the practice of making cash advances against unjustified managers' authorisations was widespread. In the "Mikoyan" kolkhoz of the Voroshilov district, 272,000 roules were wrongly or fraudulently distributed, and of this amount members of the administration benefited to the extent of 63,000 roubles. Cases of ingenious petty fraud are also quoted, such as the sale by a deputy manager to his kolkhoz of a worn-out carpet for 8,000 roubles and a sickly cow for 4,950 roubles.

It is admitted that, in Tadzhikistan, republican statistics are often rendered incomplete and inaccurate by the inability of kolkhoz managers and accountants to fulfil the involved requirements in force for the individual "passportisation" of cattle. Inventories of cattle are compiled without any regard to pedigree or quality, with the result that old and worthless cattle can easily be substituted for more valuable animals.

The citation of these and many other cases of malpractice are almost invariably accompanied by recommendations for a stricter regime of selection and appointment; there is no evidence that they are the rule rather than the exception.

Kolkhoz specialists

These include agronomists, veterinary surgeons and some engineers, although the last named are more often held on the strength of the M.T.S.'s. Except in Tadzhikistan, there does not appear to be any great shortage of specialists of this kind. In Uzbekistan there are ambitious plans for the training of cadres to keep pace with the Union's growing demand for raw cotton. There are, however, many complaints, especially in Kirgizia, of the casual attitude of specialists and of the ineffectiveness of their expert advice. For this, both the specialists and kolkhoz managers are held responsible: agricultural experts are in a sense state-sponsored controllers, whose duty it is to strive for a stricter application of the most advanced Michurin and Lysenko agricultural techniques. In many cases, they appear to be reluctant to exercise the authority of their position and knowledge, and kolkhoz executives are inclined to ignore their advice. Opinions advanced by them are also frequently overridden by district and regional Party committees, and this leads to a damping of their enthusiasm. Extensive plans now exist for a much greater infusion of Komsomol personnel into the technical ranks of the kolkhozes, and it is hoped that this will result in much more dynamic enthusiasm.

In Tadzhikistan, there is evidently a serious shortage of agricultural experts. It has been reported that the establishment is short of 220 agronomists, 350 veterinary surgeons and 50 engineers. In spite of this shortage, which is attributed to terms of employment and living conditions, there are far too many changes among existing personnel, and a marked disinclination to stay in one post for any length of time. For the years 1951-52 there was a plan for the training of over 10,000 students at evening courses on technical agricultural subjects. This number, however, dropped to 6,386 and a number of students failed to complete the second and even the first year's course.

M.T.S. (Machine and Tractor Stations)

It is evident from Press reports that the targets for increased production, particularly of cotton, where almost double the present output is planned, cannot be achieved without extending the existing M.T.S. and adding to their number. In some republics, it is claimed that ample machinery and manpower exist for this purpose: in Uzbekistan, for instance, it was stated in June that the republican government aims at the training of a total of 85,000

qualified tractor operators, 12,000 foremen of tractor brigades and 20,000 mechanics, all possessing a Middle Technical School Certificate.

The ideal M.T.S. is considered to be one which co-operates closely with the agronomists of the collective farms which they serve. In a number of M.T. stations, the councils of workers are enthusiastic in their efforts to achieve the closest co-operation with kolkhoz "aktivs". The Shakhrisyabz district of Uzbekistan is quoted as a good example of this state of affairs. In this district there has been close co-operation between mechanisation specialists and agronomists in working out a "differentiated agro-technique" for special soil and other conditions prevailing on individual estates, and there has been a joint effort at achieving the highest possible degree of mechanisation of the more difficult kolkhoz tasks. There are, however, other cases where station managers adopt a perfunctory and indifferent attitude towards their contracts with kolkhoz units. Another prevalent defect is the vicious propensity for "record-breaking," a tendency which is increasingly ridiculed in the Press.

Generally speaking, the performance of M.T. stations serving cotton kolkhozes is much higher than those engaged in other forms of cultivation. In some of the latter only 4% of the available power is generated, and sometimes only 1% of this power is used for technical purposes, that is, for purposes other than lighting, cooking and ironing.

It is reported that this year the M.T. stations of Turkmenistan are short of about 4,000 mechanics and tractor-drivers and that there is thus no hope of duplicating shifts on seasonal tasks, although the working of a double shift is a prerequisite to continuous seasonal effort. As a result, during the last season, the M.T. stations of this republic only fulfilled their sowing contract obligations to the extent of 68%. This year the area of cultivation is to be increased, and in consequence, the demands on the M.T. stations, but beyond exhortations to work at higher pressure, it is not stated how the shortages of personnel are to be overcome. Of eleven "DT - 54" diesel tractors in the Karabekaul district, only one is working a double shift, and many of the "Universals" have no mechanics attached to them at all. Achievements of the tractor park of this district are low, and the daily achievement on certain kolkhozes is only 5 - 6 hectares, while the average daily cover for a "Universal" of the 3rd Akhunbabaev M.T. station is only 9.3 hectares against the norm of 12 hectares. Even this low average has only been achieved by the efforts of a few inspired tractor-drivers, the average achievement of the majority being 5 - 7 hectares. The reasons for this low standard of work are found to be infringements of labour discipline, bad maintenance, lack of timely assistance from mobile field repair gangs, and a shortage of personnel to work double shifts. Shortage of personnel is also reported from Kirgizia; in the Issyk Kul Oblast, there are not enough driver-mechanics for double-shift duties; night operations have had to be given up. Even during the day some tractors stand idle because of shortage of water and other avoidable reasons due to the negligence of the personnel.

On the basis of Stalin's famous dictum "Kadry reshayut vse" ("Cadres decide everything", i.e. everything depends upon manpower), shortcomings of every description are attributed to shortage, or much more frequently, to the inefficiency of personnel. From Kirgizia come many complaints of improper use of machinery and inadequacy of repairs. In the Frunze oblast there are seventeen M.T. and two M.Zh. stations whose equipment has only recently been supplemented with modern caterpillars, diesel tractors, new combines and special machinery for the reconstruction of the irrigation system. But this equipment is not being properly maintained and considerable alarm is displayed at the bad standard of tractor repairs at the Petrovka M.T.S. Similar complaints come from the Alamedin and Belovodsk M.T.S.'s. The Atbashi M.T. station recently received 24 new "DT - 54", but in the absence of qualified mechanics, 18 of their engines were quickly out of action. The steps taken to train new personnel are quite inadequate: in spite of the shortage of trained personnel at Pokrovka, only 21 out of a quota of 36 were sent to the Tokmak school of mechanics. In spite of a report that the winter repair plan of Turkmenistan was completed up to 98.6%, there are many complaints of the inadequate work of workshops in this republic. In the 2nd Leninsk and the 2nd Takhta M.T. stations, 25% of the tractors are out of action owing to the poor quality of repairs.

Even in Uzbekistan, where the standard of efficiency in the M.T. stations is admittedly much higher, there are complaints of the slow tempo of repairs both to tractors and to other machinery. By the middle of February 1953, the quota for the fourth quarter of 1952 had not been fulfilled, and the cotton M.T. stations had only carried out their plan to the extent of 70.8%. Repairs to engines carried out at the Urgench, Nukus and Denau workshops were quoted as being of a particularly low standard.

The Peasant Farmers

As already indicated, the peasant farmers, or "dekhany" as they are called in Central Asia, are not normally classified as "cadres". This statement needs some qualification: when a body of peasants is attached to a kolkhoz for some specific task, it may be, and often is, described as a "cadre". It is not, however, possible to refer to the peasants as a "cadre" in the same way as engineers or any class of technician. Be that as it may, the importance of the peasants as an element of manpower is undoubted, and generally admitted.

The mobilisation of peasant labour is unquestionably compulsory, at any rate within the established quotas which are rigidly laid down. A kolkhoz can never escape its duty to provide the allotted quota without invoking much criticism and pressure. In Uzbekistan, the number of able workers to be put into the cotton fields in 1953 was clearly defined in an official "ukase" dated 19th April. Quotas were given as follows for the various oblasts: Tashkent - 130,000; Fergana - 159,000; Namangan - 105,000; Andizhan - 146,000; Samarkand - 108,000; Bokhara - 121,000; Kashka-Darya - 41,000; Surkhan Darya - 68,000; Khorezm - 77,000; and the Karakalpia Autonomous Republic - 68,000. To this so-called primary

mobilisation might be added work on other normal communal tasks such as repairs to track-roads, the cleaning and repair of irrigation channels, and on any work for which machinery was for some reason unavailable.

Published reports and statistics indicate that a greater degree of prosperity among the peasant farmers has followed in the wake of the increase in mechanisation, the enlargement of the area of kolkhoz estates and the improvements to irrigation. One instance of this increased prosperity which has been quoted is that of the Kaganovich kolkhoz of the Pap (Kirgizia) district which last year produced the high average of 29.3 centners per hectare. Its annual plan had been overfulfilled and the annual revenue amounted to ten million roubles, of which two million had been allotted to indivisible funds. A high standard of general prosperity has been reached and many farmers' families have earned during the year 16 000 to 18,000 roubles and 5 to 6 tons of grain in kind. Record-breakers have earned even more. A "brigadir" of the "Stalin" kolkhoz of the Kyzyl Ayak (Turkmenistan) district achieved a record of 50 centners per hectare and earned 30,000 roubles and three tons of grain. In Tadzhikistan, too, earnings have greatly increased, peasant farmers earning 40% more than in 1951 - 20 roubles a day and 3.5 kilogrammes of grain in kind. In the Ordzhonikidzeabad district there were several families which earned as much as 82,000 roubles in cash during 1952. There is, however, no mention of minimum earnings, and the established practice of giving percentage statistics does not reveal the varying aspects and standards of living on progressive and backward estates. The lower output and standards of living in the latter are invariably attributed to inefficiency both on the part of the peasant farmers, and of Party organs for the ineffectiveness of their mass propaganda. Cases are quoted of kolkhoz funds being sadly depleted in order to pay for work done on kolkhoz estates by outsiders, although this practice is strictly prohibited by the Artel Articles.

There are various complaints about the method of organisation and distribution of labour tasks within the kolkhoz. One of the defects mentioned is the failure to allot specified and well-defined plots of land to individual workers, which leads to the shelving of responsibility. The practice of equal pay irrespective of output or performance is also criticised. One of the causes of frequent failures to provide sufficient labour for urgent field tasks is found to be the inflation of farmers' private allotments, and orders have been issued to reduce such allotments strictly within the areas prescribed by the Artel Articles of Association. In the Mary district of Turkmenistan, demands for the supply of manual labour are only met to the extent of 25%, and on many kolkhoz estates hundreds of labourers are absent from the cotton field even when they have been allotted to specific tasks. Grave irregularities in the hours of work are reported from the kolkhozes of the Leninsk district of the Tashauz oblast, where it is not unusual for work in the fields to start after 9 a.m., and for the lunch hour to be extended over several hours. Such labour indiscipline is usually attributed to the bad organisation of seasonal field camps and of feeding arrangements, and to the inefficiency of

propaganda. There has been a noticeable falling off in the use of wall papers and placards, which have been found most effective in the past. Women, the mainstay of labour on the cotton fields, are often absent owing to the inefficient running of creches and kindergartens.

The foregoing refers mainly to the cotton kolkhozes. The kolkhozes devoted to other types of agriculture appear to be in a far less satisfactory state. There are frequent criticisms and complaints of the selection, distribution and training of manpower on stock-breeding farms, and all, from managers and technicians to shepherds and dairymaids, are castigated alike. On the sugar-beet plantations in the Kant district of Kirgizia, harvest yields are showing a serious decline. In 1949 the yield of beet per hectare was 354 centners, while in 1952 it was only 265. This is attributed partly to the failure to accumulate and distribute sufficient manure and to collect supplies of mineral fertilisers from supply bases, and partly to the unjust and disproportionate allotment of labour tasks. The tasks given to women are often far too heavy, and they are sometimes compelled to work on beet fields 15 kilometres away from the kolkhoz labour base. This means that their working hours are restricted to five or six.

In some areas, notably in Kirgizia, there is a tendency to oppose mechanisation. A recent report from the Aravan district disclosed that forty labourers of both sexes had been seen working with their old-fashioned, heavy "ketmens" (spades), while a tractor and a cultivator stood idle at the edge of the field. The "brigadir" in charge of the gang explained that the workers were afraid that if they entirely abandoned their traditional mode of work, they would soon lose all means of subsistence. Such aberrations are usually attributed to the failure of publicity organisations to increase the appreciation by rural collectives of their exacting social duties towards socialised property. It should, however, be noted that there is no evidence in the Central Asian Press of any numerical shortage of manual labour, the emphasis being always on the lack of trained technical personnel.

OPERATION "SPARROW"

The following is a translation of an article published in Kazakhstanskaya Pravda of 21.6.53. The quotations are evidently from an actual official report, and the object of the article is to ridicule the exaggerated importance sometimes attached to mechanisation and scientific research.

This year the alarm has once again been sounded from several parts of Southern Kazakhstan: the Indian sparrows have begun their invasion. They are inflicting considerable damage on the wheat, barley, millet and hemp crops, and the republican experimental station for plant preservation in the Kazakh Institute has undertaken the task of finding an effective means of combatting the pest. A new subject has made its appearance in the programme of scientific studies: "The Indian sparrow and the struggle to defeat it" (Report for 1952 on the Scientific Research Work of the Republican Station for Plant Preservation).

On the theoretical side of the problem, the scientists have carried out their task with reasonable promptitude. In the course of three months a treatise was written entitled "The Biology and Economic Significance of the Indian Sparrow." It appears that this representative of the feathered tribe is practically indistinguishable from the common sparrow: it is perhaps a little lighter in colour; it nests in trees and sometimes in cliffs. But it has been established that there are certain "fine points" about the Indian sparrow, the elucidation of which constituted the experimental part of the research.

It was decided to begin with traps.

Working under the scientists' direct control, carpenters manufactured 25 nesting boxes with self-releasing bottoms. Beneath each box was fixed a bag. It was anticipated that the sparrows would be precipitated into these bags in showers.

The sad story of this experiment is described in detail in the station's scientific report. The vast majority of the sparrows unfortunately displayed no particular interest in the nesting boxes, and evinced an obstinate disinclination to fall into them. Moreover, the construction of the boxes proved disappointing. The learned husbandmen established the fact that directly it rained, the mechanism of the trap ceased to work; it was necessary to take it out, dry and reset it. A decisive blow to the designs of the experimenters was struck by a certain pair of sparrows deeply concerned with the propagation of their species. They completely upset everything by contriving to build for themselves in one of the traps a small but commodious nest.

After long reflection, the scientists arrived at the following conclusion: "It is doubtful if traps can serve as a means of mass destruction of sparrows. Since their manufacture presents serious complications and their mounting requires a considerable labour force, there are, at the present moment, no grounds for recommending traps as a method of conducting the campaign against the sparrows."

Preparations were made to try out a new method - the destruction of the nests and progeny of the sparrows. This method was by no means novel: "This is well known to the population of the districts where the sparrows' depredations take place".

A series of experiments was carried out in specially selected localities: 1. "Dismantling of nests with the aid of long poles." Scientists armed with long poles tried to reach the Indian sparrows' nests from the ground. The manipulation of the heavy poles was found to be difficult. Special mobile platforms on wheels were then constructed, but these did not have the desired effect. 2. "The burning of nests with torches soaked in oil." This experiment almost led to disaster; the nests were not burnt, but everything else in the neighbourhood quickly burst into flame. 3. "Firing at the nests with small shot." This was carried out as follows: A man climbed up the tree to see if there were any fledgelings in the nest. He then climbed down again and fire was opened. The man then climbed up the tree once more to see whether a hit had been registered. It was discovered, first, that the nest could not be hit with every gun, and, secondly, that not every kind of shot was effective. For instance, nothing could be done with small shot; buckshot had to be used.

It was established that the necessary effect could not be achieved with one volley. Two, even three volleys were required - right, left and centre. But when the station staff took up the matter of financial effect, they were horrified, and noted in their scientific report that the result of the experiment was not entirely favourable. "Although the destruction of nests is a thoroughly realistic method of conducting the campaign against the sparrows, its application on a large scale presents difficulties owing to the great amount of labour required and the impossibility of mechanisation."

In spite of the unpromising results of the experimental work carried out during 1952, it is noted in the station's scientific report that "the study of the biology of the sparrows carried out during 1952 has made it possible to formulate a series of measures by which the campaign against these pests can be pursued, and these measures will be developed in the near future." The station has planned a new series of experiments for 1953: it has been decided to try out the use of poisoned bait, and, in addition, "to carry out the work of destroying the sparrows' nests in the trees by various means, and to attempt once more to subject the nests to gunfire..."

Once more the rattle of musketry will be heard in the land !

How the problem of mechanising the destruction of the nests will be solved

it is difficult to surmise; the report makes only a general reference to this matter and gives no details. Only the vaguest guesses can be made: perhaps the station will work out the construction of auto-snaring traps; or, instead of poles, a mechanical automatic nest-dismantler equipped with a conveyor belt will be manufactured; or perhaps the experimenters will resort to the creation of special power-driven shot distributors capable of concentrated fire. No suggestion has so far been made that aircraft should be used in these operations.

We do not venture to take it upon ourselves to suggest a way out of this difficulty to Dzhiyembaev, the director of the station. But cannot an analogy be found in Mushfiki, the hero of the old Tadzhik story "Rat-poison", who discovered the following way of dealing with rodents? Mushfiki took some ordinary ash and announced that he had rat-poison for sale. The first customer asked how the poison should be used. "Take the rat", explained Mushfiki, "hold it by the tail, and strike it forcibly on the ground. When you see that the rat no longer moves, sprinkle the poison on its nose and mouth. It will immediately expire." "That seems odd to me," said the surprised customer. "If I catch a rat, I can kill it without using poison." "It is my business to sell you the poison", said Mushfiki. "It is your business to decide whether you kill the rat in your way or in my way."

In the south of the republic the wheat and barley crops are ripening. Flocks of Indian sparrows are ready to renew their ravages. Meanwhile the solution of the problem of how to wage war on these pests drags on, and threatens to lighten the State Treasury by a further fifty thousand roubles.

A serious problem requires a serious solution, and not hare-brained schemes. Can it be that the object of the fruitless antics of the experimenters of the Republican Station for Plant Preservation is simply to provide subject matter for a humorous article? It seems possible to us that by the time, only vaguely discernible, when the Republican Station for Plant Preservation delivers its weighty judgment, effective results could have been achieved by the children on the farms. How would it be to entrust to them the solution of the problem of the Indian sparrow?

U Z B E K I S T A N

Road Transport

In the autumn of 1952 the press reported that the Central Government, and even Stalin himself, were taking considerable interest in the system of road transport in Uzbekistan. This was the signal for a number of criticisms of the road transport system, and in particular of the roads themselves. Much of the information in the present article should be taken as relating to 1952, although it may have appeared in the press much later.

In general, the state of road transport is considered to be unsatisfactory. During 1952 motor transport facilities were increased by 72%, but although the amount of freight carried by road had increased by 87%, it was stated that the capacity of motor transport bases was only being used to the extent of about 50%.

The Cotton Harvest

One of the most important functions of the road transport system of Uzbekistan is the delivery of the cotton harvest to rail and river heads. In July 1952, instructions were issued for the completion by the end of the cotton season of all repairs to existing roads, and of the new stretches of road and new bridges which were planned to be opened by that time, i.e. 15th September. By the end of July work had not been started, and it became clear that the State Plan for road construction and repairs could not be fulfilled in time. The main cause was said to be the scarcity of road building materials coupled with delays in conveying them to the places where they were required. The Fergana region had delivered to road construction gangs only 2% of the necessary gravel, and Kashka Darya had so far done nothing. It further appeared that budget allotments for road and bridge construction had not been fully applied.

New roads

Among the new roads designed to facilitate the transport of cotton is that projected on the alignment Stalino - Kosh Tepe - Sarpi. This is a road of considerable importance to the economy of the Andizhan oblast, but its completion has been delayed for over three years on account of the inefficiency of the Andizhan Road Construction Station. For this shortcoming the local Party Committee is considered basically responsible. Another road of great importance to the cotton industry is the so-called Zeravshan road in the Kermininski district. A large force of labour has been applied to work on this road, but by 1953 it was still uncompleted. The need for speeding up this work had been mentioned in the autumn of 1952 when delays were reported in the building of the bridge over the water "collector" near Vabkent. This delay was most harmful to the economy of the district as it interfered with the seasonal stream of cotton and grain

deliveries from the Bokhara district. Delay in the completion of the Surkhan and of the Katta Kurgan - Mirbazar roads has also been made the subject of strong criticism.

The expanding jute and hemp industry is making considerable demands on the construction of new roads. The speedy completion of the newly projected hemp mills at Chimbai and Dzhuma Bazar depends largely on the construction of new roads for the transportation of building materials and mill equipment. In 1952 two million roubles were allotted for the building of feeder roads to the new Novo-Zhiznenski and Tashaul jute and hemp mills in the Nijni Chirchik district, but it is clear that so far very little has been done to implement this project.

Another area where the slow tempo of road building is having a serious effect is in Central Fergana, where the settlement of future cotton-growers on large hitherto undeveloped tracts of newly irrigated land clearly requires the existence of a proper road system.

Road Construction Stations

Largely as a result of the interest taken in Uzbekistan road transport by the Central Government, several new Road Construction Stations have been established. These stations have been supplied with tractors, bulldozers, scrapers, graders, rear dump waggons and other useful equipment designed to speed up major tasks of road repairing and construction. The working of these stations has been however subjected to strong criticism. Local Soviets, who are responsible for these stations as well as for all road works, are accused of negligence and of failure to punish delinquents. Good roads, declares the press, not only lead to efficiency in transport and considerable economies in fuel, but they reflect the level of culture of the people living on the land through which they pass. These important matters are not fully realised by many republican and local organisations who consistently show reluctance to provide motor transport to assist road construction. There is in existence a republican road construction assistance scheme under which the normal equipment of the Road Stations is to be daily supplemented by the temporary loan of 381 trucks assigned by various Government organisations. Organisations do not, however, adhere to their commitments for this scheme. On a certain date, instead of 381 vehicles, only 21 were provided, among the principal defaulters being the Ministry of Transport and the Ministry of Cotton, which, out of their commitments of 63 and 98 vehicles, only provided 13 and 6 respectively.

Tashkent

Attention has been drawn to the deplorable state of the ZIS 154 buses of the No. 1 Coach Station of the Ministry of Motor Transport which are plying between Tashkent and Tashkhlopokmash in the Ordzhonikidze quarter of the capital. The regular use of these buses on this route is actually against standing instructions, which prohibit the movement of Diesel buses on cobbled roads. Apart from this, the buses usually carry

100 passengers instead of the prescribed 50. As a result of wear and tear from this poorly surfaced road and of overcrowding, these buses are now in a disgraceful state: the seats are ripped up or broken, the springs are bent and the plush upholstery torn. Some of the buses are now being cannibalised.

There have also been complaints about the working of the Skver - Abrazivny Zavod line. The buses on this line are worn out and can hardly sustain a day's work without being returned to the garage for petty repairs. All traffic on this route stops at 8 p.m., and workers living along the route are thereby seriously inconvenienced.

Provincial Roads

There have been many complaints about roads in the provinces. During the winter the two-kilometre road connecting Rabochyi Gorodok with Yangi Yul is made impassable by mud. A start was made with metalling the road, but this was abandoned for some reason after 500 metres had been done. The kolkhoz estates in Shuralisaiski and Khalkabad had no proper road communications with their district centre, and the Sovkhoz "Pyatiletka", and a number of kolkhozes in the lower Chirchik region, are at times cut off from their main bases of supply. During the winter Chinaz is cut off from certain rural districts which it normally supplies with mineral fertilisers. The road connecting the Verkhne-Volinsk district with the railway has fallen into disrepair, and although funds are available, they have not so far been utilised. Although hundreds of cars use the road connecting the Nur-Atinski region with Samarkand every day, it is in a deplorable condition and breakdowns are frequent.

Karakalpakia

As the result of the construction of certain new tarmac roads in Karakalpakia, plans have been formulated for a greater use of heavy motor vehicles during 1953. It is anticipated that passenger traffic will be doubled and freight haulage increased two and a half times. The Nukus coach station is shortly to receive a first consignment of 52 ZIS 155 passenger buses. In anticipation of the opening of bus lines between Nukus and Kyz Ketken and between Khodzheili and Takhia Tash, marquees are to be erected at Nukus, at a pierhead on the Amu Darya and on the Chimbai road.

ULUG BEG, STATESMAN AND ASTRONOMER

The year 1949 marked the 500th anniversary of the death of Ulug Beg, the great Uzbek statesman and astronomer, who was governor of Samarkand from 1409 to 1449. Shortly before the anniversary, Soviet archeologists resumed work on the site of Ulug Beg's famous observatory, which had been begun in 1941, but was suspended during the war. Some description of the results obtained in the latest excavations was published in the Central Asian press during 1948 and 1949, but a much more comprehensive account is now to be found in a work entitled "The Astronomical School of Ulug Beg", by T. N. Kary-Niyazov, a member of the Uzbekistan Academy of Sciences. This book has been awarded the Stalin Prize, and was reviewed at some length in the June number of the Moscow magazine "Priroda" (Nature).

Kary-Niyazov has set himself the task of investigating one of the most interesting questions in the history of astronomy - the remarkable extent to which this science flourished in the 15th century in Samarkand. The domination of the famous warrior Timur and his descendants was a stormy period in the life of the Uzbek people, and a particularly important part was played by the Governor of Samarkand, Ulug Beg, the grandson of Timur. Ulug Beg was not only a statesman of outstanding ability whose many undertakings were marked by their progressive character; he was a great scientist of the 15th century who left a deep impression on the history of astronomy. The Samarkand observatory built by Ulug Beg, and the astronomical tables compiled by him and his colleagues have made his name famous throughout the ages.

Ulug Beg became governor of Samarkand during the civil wars which followed the death of Timur. The vast empire was disintegrating, and dissension and war ensued among Timur's descendants. During the period of his governorship, Ulug Beg took little interest in the war: he was more concerned with peaceful and creative activities - the establishment of cultural institutions and the development of the sciences, and particularly that of astronomy.

The most famous of the beautiful buildings constructed by Ulug Beg for cultural purposes were the Medrese (religious school) in the great city square of old Samarkand and the Astronomical Observatory on the hill of Kukhak near Samarkand. The Medrese is in a comparatively good state of preservation at the present time, but the observatory was destroyed after Ulug Beg's murder by fanatics acting on the instructions of the reactionary Muslim clergy. Up to the beginning of the 20th century, Ulug Beg's observatory merely consisted of a heap of rubble, and it has taken many years of archaeological excavation to discover part of the vast building, to restore the appearance of the whole edifice, and to form some idea of the arrangement of the observatory.

In Kary-Niyazov's book the story of the archaeological excavations is

described in detail, as well as the achievements of Soviet scientists in their study of the principal astronomical instrument of the observatory, the huge stone quadrant which was used for the accurate observation of the sun, the moon and the planets. The observatory as a whole consisted of a lofty three-storey building erected on the hill of Kukhak. Only half of the great quadrant was housed in the building itself, the lower half being underneath the observatory in a chamber carved out of the hill-side. The observatory was surrounded on all sides by gardens and was thus cut off from the dusty roads. Like all public buildings of those times, it was profusely decorated with wall paintings and mosaics. The famous quadrant was a huge stone arc of 90° with a radius of 40 metres. The plane of the quadrant coincided with that of the observatory's meridian. By means of a narrow, upright slit it, as it were, divided the whole interior of the building into two halves. The quadrant was completely protected from extraneous light. In the centre of the arc on the roof of the building was a diopter, that is, a small chink through which the rays of the planet under observation fell on the calibrated scale of the quadrant.

Apart from the quadrant, there were many other astronomical instruments in Ulug Beg's observatory, and on the basis of the observations of the stars and planets which were carried out by means of these instruments, the famous list of the position of the stars and the tables showing the movements of the planets were compiled. These lists and tables were recognised by astronomers all over the world and served as models for such productions for a hundred years .

In the great library of his father Shahrukh, Ulug Beg was able to familiarise himself not only with all the classical works of Greek scientists which had been translated into the principal scientific language of the day, Arabic, but also with the works of such illustrious representatives of the Uzbek people as the eminent scientists Fergani, Biruni, Khorezmi and many others. In his book, Professor Kary-Niyazov has clearly indicated the originality and high level of culture possessed by the people of Central Asia before the conquest of a large part of the Middle and Near East by the Arabs, and the influence exercised by this older culture on that of the Arabs. By making use of a vast mass of factual material relating not only to astronomy but to many other fields of knowledge, such as art, architecture and history, he has painted a broad historical canvas against the background of which he has examined the life and activities of Ulug Beg.

In the third chapter of the book, the author gives an analysis of the astronomical work of Ulug Beg and his colleagues. In the course of this he makes use of a large number of hitherto unpublished manuscripts and makes a critical examination of all the material previously published. An outstanding feature is the method used by the author to elucidate the scientific heritage of Ulug Beg and his school: he first translates all the calculations into modern mathematical language, and then proceeds to expound them in detail. This enables a large circle of readers to understand Ulug Beg's methods of work and to appreciate their great significance.

It is important to mention that by reason of the vast scale on which it was conceived and the results of its observations, Ulug Beg's observatory constituted the culminating point of astronomical science not only of the whole Muslim East, but of the whole world of those times. The author has carried out an exhaustive analysis of the thirteen chapters of introduction to Ulug Beg's famous astronomical tables, which comprise a description of the various systems of chronological calculation, tables of trigonometrical functions and a theory of planet movement.

In his fourth chapter, the Professor gives an eloquent and clear description of the tragic end of the great scientist. Ulug Beg was treacherously killed by the order of his son Latif, who was the unwitting tool of the reactionary clergy and feudal aristocracy. The murder of Ulug Beg was not a fortuitous circumstance: the author shows convincingly that the death of the great scientist was an expression of the heightening struggle which was everywhere taking place between the forces of progress and the reactionary clergy of all religions, and in which, in the West, such scientists as Roger Bacon, Giordano Bruno and Galileo were also sacrificed.

The great Uzbek poet, Alisher Navai, wrote of Ulug Beg: "All Ulug Beg's fellows have vanished from the earth. Who remembers them to-day? But Ulug Beg stretched forth his hand to science and achieved much." The Uzbek people and all the peoples of the Soviet Union gratefully preserve the memory of the great 15th century astronomer.

T A D Z H I K I S T A N

ROAD AND RAIL TRANSPORT

The mountainous character of a large part of the Tadzhikistan republic makes the problem of road and rail transport a particularly difficult one. Press reporting on this subject presents a picture of serious shortcomings and of vigorous efforts to overcome them. Last autumn statements appeared in the press to the effect that the existing resources of the republic's mechanised road transport were unable to cope with the State transport plan or meet the huge haulage demands arising from the republic's expanding economy. At the autumn Party Conference, it was emphasised that in spite of the addition of a large number of heavy and passenger vehicles, the republican road transport organisations were for some reason unable to utilise them to the full. There was criticism of the maintenance arrangements at haulage bases; and it was stated that owing to the failure to deliver the cotton harvest to rail-heads, the plans evolved by the Ministry of Cotton could not be properly carried out. One of the principal reasons for the inefficiency of mechanical road transport was thought to be the poor condition of the roads, for the maintenance of which the local Soviets were primarily responsible. The working of the railway, and particularly the broad gauge line, was also found to be highly unsatisfactory. The narrow gauge railways had carried out the State plan, but there was room for improvement even here. The need for developing the Civil Air Fleet was stressed, but few details are available about this means of transport.

Stalinabad bus service

There have been many complaints of the working of the passenger transport services in the Stalinabad area. There appears to be no proper system for the allocation of buses to city and suburban lines, and the resulting confusion causes much unnecessary hardship to passengers who often have to walk to their destinations. In theory, buses run up to one or two o'clock in the morning, but in practice they can rarely be seen in the streets after nightfall. Labour discipline among the staff is at a low level, and bus conductors frequently overcharge passengers. These conditions prevail throughout the city of Stalinabad, and also on the bus routes to Ordzhonikidzheabad, Varzob, Kulyab and other cities in the district, and in spite of instructions issued by the Auto Transport Ministry for the acceleration of the movement of passenger buses, passengers frequently have to wait hours at a time and often give up their vigil in despair.

Haulage of Freight

A movement is spreading among workers of transport organisations to improve conditions in the haulage of freight, which at present leave much to be desired. For instance, on the occasion of the Soviet local elections in March, the drivers of the Vostokzagotzerno (Eastern Grain Production)

decided to fulfil their socialist competition obligations, to do away with all unnecessary delays and stoppages en route and generally speaking to speed up the time of their scheduled runs. Detailed instructions are now written out before each run and complete records of achievement maintained. As a result of these measures, the plan for the haulage of grain in the Vakhsh valley has been more than fulfilled (135%). Many drivers of the Ordzhonikidzeabad Road Transport base have even delivered double the amount of grain stipulated in the plan. Exceptional results have also been achieved by drivers of No. 2 "Auto-base". GAZ 51 vehicles have been converted to carry passengers on some of the mountain routes, and by February one of these converted trucks had covered 101,610 kilometres with only running repairs. Even piston rings did not have to be replaced.

Road Transport in the Pamirs

The building of roads in the Pamirs dates back to 1895, when the first road from Osh to Khorog was built and rest houses erected at various places along the route, including Murgab (Pamir Post). The trunk road from Stalinabad to Khorog was planned in 1940 and was expected to take 5 years to build. In fact, however, it was completed earlier. In June 1940 22,000 kolkhoz workers were drafted into the area to begin the work, and by 1st September of the same year, motor cars passed for the first time through the Darvaz gorge. The existing trunk road from Osh to Khorog was completed in 1931, and on 14th June that year, a great caravan of 2,000 camels reached Murgab, and by 2nd September made its way to Khorog. This caravan was accompanied by 2 motor cars which successfully negotiated the Kyzyl Art Pass (4444 metres). In 1932 six new 1½-ton trucks crossed the Pamirs, and since that date motor traffic along this road has grown continuously. The Osh - Khorog trunk road is 740 kilometres long and can now be easily covered by car in three days. There are now three main roads from Khorog: to Osh, to Rushan and thence to Stalinabad, and to the Rosht - Kalinsk district. All district centres in Badakhshan are now connected by motor roads.

A drive for greater efficiency is also taking place in the Pamirs. Records of achievement include that of a ZIS 150 which covered 80,840 kilometres without undergoing even minor repairs. A certain ZIS 5 truck driver has been steadily improving his record: his truck carries 1.8 tons of excess freight on each run, and has already covered 53,000 kilometres without even minor repairs, this distance being 15,000 kilometres in excess of his prescribed limit.

This year the snow on the high mountain roads of eastern and western Pamirs began to melt early in April, and the road transport season was thus expected to begin before 1st May. Preparations for the summer season, and particularly for the 1st May celebrations, were therefore speeded up. Steps are being taken to increase the number of transport drivers working at high altitudes, and 50 young men of local nationalities have been recruited.

Railways

There has been comparatively little reference to railways during the period under review. On the short stretch of broad gauge line which runs through Tadzhikistan there has been a drive similar to that organised elsewhere in Central Asia to increase the haulage power of locomotives. It has been reckoned that an annual 1% increase in the average weight of trainloads in the whole Union could produce an economy of 76 million roubles, and in response to the Union-wide demand for economy, the Stalinabad Locomotive Depot claims to have economised 760 tons of fuel during the first half of 1952. There have been some criticisms of the running of the broad gauge railways, particularly in regard to passengers' amenities. At Pakhtaabad, for instance, no proper station building has so far been erected for the accommodation of passengers and their baggage. The station itself is temporarily located in shop premises; there are no passenger waiting-rooms, and the booking-office is in the same room as the refreshment buffet. There are no facilities for the despatch or collection of baggage, which can only be done from the stations at Sayr Assiya and Regar, 17 and 9 kilometres from Pakhtaabad.

Apart from the broad gauge line, two narrow gauge lines converge at Stalinabad; one of 240 kilometres serving the Vakhsh valley and its cotton-producing districts and stretching to the Pyandzh; and the other due north from Stalinabad to Pugus in the Varzob gorge, 32 kilometres from the capital. Thence new lines are projected to the Ziddi coal mines, and to Obi Garm, 110 kilometres away at the entrance to the valley of the Upper Vakhsh.

According to February reports, the 1952 freight haulage plan for the narrow gauge railways was completed as follows: cotton fabrics - 114%, raw cotton - 108%, mineral fertilisers - 100.8%, liquid fuel - 102% and timber - 87%. This high achievement was due to the measures taken in the early autumn to prepare the narrow gauge railways for winter conditions. A special committee was formed to organise the thorough inspection of the track, locomotives and waggon parks, and of the railway buildings.

Considerable efforts are being made to improve amenities in the Stalinabad settlement in which the narrow gauge workers live. Several prefabricated houses have been erected and a new summer cinema with seating accommodation for 400 has been opened. There is also a crèche for 40 children, a number of retail shops and other amenities. Eventually, locomotive brigade workers are to be provided with flats in two-storey houses.

SADRIDDIN AINI: AUTHOR, SCHOLAR AND JOURNALIST

Considerable attention has recently been focussed on the 75th anniversary of the birth of Sadriddin Aini, the Grand Old Man of Tadzhik literature, who has dominated Tadzhik scholarship and writing for a large number of years.

Aini is one of the few writers of Central Asia who has gained the almost unqualified approval of the Soviet authorities, and his anniversary has therefore been officially acclaimed as an event of outstanding importance. On 5th May, the department of Social Science at the Tadzhik Academy of Sciences held a session entirely devoted to Aini's 75th birthday, and to his activities as a Soviet writer and as president of the Academy. In a brief introductory speech, S. Ulug Zade dwelt on the importance of Aini's achievements in literature and in the realm of scholarship. Papers were also read on the part played by him as a representative of the "realistic" school of literature, and on his work in the development of the literary language of the Tadzhiks. The session was attended by many representatives of the educational and academic circles of Stalinabad. A similar session was held in April at the Uzbek State University.

At the same time, the widest possible publicity has been given to Aini's works and there have been displays of these at many public libraries, including one in Stalinabad where the reading room was decorated with printed slogans such as Stalin's pronouncement that the Tadzhiks are a distinct people with a great and ancient culture. Exhibitions have been arranged of pamphlets on Central Asia written by Lenin and Stalin; and Aini's "Anthology of Tadzhik Poetry" and his novels in the Tadzhik, Uzbek and Russian languages have been prominently displayed. Great play has been made of the inspiration which he is said to have derived from the works of Gorki.

Social and Political Background

Sadriddin Aini was born on 27th April 1878 in the village of Soktor of the Gidzhuvan district of Bokhara. His father was a simple peasant, and his humble origin is constantly emphasised by his biographers. He began his studies in a village school, but in 1890 he entered a Bokhara Medrese (Institute of Theological Studies), from which he graduated in 1905. He soon began to take more interest in secular than in religious education, and is reported to have assisted in the launching of schools at which subjects other than religious ones were taught. His activities in this field eventually excited the opposition of the Emir's officials; and in 1917 he was imprisoned and sentenced to a flogging of 75 strokes. In one of his books called "Specimens of Tadzhik Literature" there is a photograph of his terribly lacerated back taken after this beating. He recounts how, had it not been for the Russian railwaymen of Kagan station, who set him free and took him to their hospital, he would probably have died, as did

one of his friends who was similarly punished.

Aini's career as a writer began in 1894, and it is admitted by his biographers that at the beginning he did not adopt that creed of social revolt which eventually led him to recognise close Russian-Tadzhik rapprochement as the only means of saving the Tadzhiks from the obscurantism of pro-Persian and pro-Turkish elements, and from the darker perils of British imperialism. At first he embraced the doctrines of "Jadidism", a movement resulting from the upsurge of nationalist and bourgeois ideas. The "Jadids" preached pan-turkism and pan-islamism, but they were little interested in the overthrow of the Emirate, or in relieving the sufferings of the peasants. In the second edition of Gafurov's "History of the Tadzhik People", Jadidism is stigmatised as a reactionary palliative running counter to the real progressive revolutionary movement which began to gain momentum at the beginning of the 20th century. Eventually, Aini came to realise the foreign affiliation of this movement, and that it was deeply inimical to the real interests of the people. In his novels "Dokhunda" and "The Slaves" he did his utmost to expose the anti-democratic essence of Jadidism; and he describes how the peasants unmasked and opposed the movement after they had rallied beneath the banner of the Communist Party.

In the many tributes to Aini's literary genius which have recently appeared in the press, he is acclaimed not only as a brilliant novelist, historian, journalist and essayist, but as a master of research into the works of Avicenna and of the great Tadzhik (sic) poets Firdausi, Rudaki and Saadi, and of the great Navoi, the national poet of the Uzbeks. His historical novels treat of such subjects as Malik Timur, a Tadzhik hero who fought the Mongols in the 13th century, and the popular risings against the Arab invaders. As a political pamphleteer he is best remembered for his early work "Bokhara Stranglers", a forceful satire designed to unmask the machinations of the local clergy. In it Aini mercilessly ridiculed the Emirate and its reactionary clerical supporters; the pamphlet was widely publicised for the benefit of the downtrodden and ignorant peasants, and it affords a good example of the extent to which the writer had accepted the principles of Communism.

The Memoirs

Aini's latest and perhaps his most considerable work, his "Memoirs", has been given the widest possible publicity in the Soviet press. Three parts of these memoirs have so far appeared, the first two in Russian as well as in Tadzhik. As seen by press reviewers, the principal importance and value of the memoirs lie in their interpretation of life as informed by indomitable faith in the strength of the human "kollektiv", in socialism, and in revolution as a force bent ultimately on reconstruction rather than destruction. In the first two parts, Aini tells in detail of his hapless childhood in the village of Soktor, of his devotion to Tutti, an old woman who was kind to him, and of his interest in folklore. The second part also describes his work at the "medrese", and his own and his comrades' ambition to study Russian and acquire a fuller understanding of

Russian culture. The third part, recently published, deals with the years 1892 - 97, and is largely devoted to his friends among the poets and budding scholars of those times.

Novels and Stories

In the field of fiction, Aini's main work is the trilogy composed of the three novels "Odina" (Adineh "Friday"), "Dokhunda" and "The Slaves". This trilogy seems to have been prompted by Stalin's statement made in July 1923, that among the Nazirs (Ministers) of the Soviet of the Bokhara People's Republic there was not a single peasant. This theme was taken up by Aini in a number of articles on the Tadzhik hill-people, and in a short story entitled "The Adventures of a Poor Tadzhik". Later, he expanded this story into the novel "Odina", in which he described with much emotion, but with great force and artistry, the misfortunes of the hill people during the time of the Emirate. "Dokhunda" appeared in 1928 and presented, for the first time in Tadzhik literature, the portrait of a Tadzhik Bolshevik, a political leader imbued with socialist and communist ideas, who, although imprisoned by the Emir, does not give in, but retains his integrity, thus demonstrating the growth of political comprehension and stature among the Tadzhiks. This was the first work in which Aini combined the characterisation of political and social reformers with a picture of the life, customs, sentiments and thought of Uzbeks and Tadzhiks over a period of thirty years. The concluding volume of the trilogy, "The Slaves", was written in 1930, and is in complete conformity with the party line. Its theme is the struggle for the enforcement of the Stalin Articles of Association of the Agricultural Artel, and the writer in it lays down the established precepts to be observed by kolkhoz Party cadres and by the ordinary peasants, in order to induce true Bolshevism, and to acquire wealth as the result of collective effort. The book also contained indications of the part to be played by the Red Army in the political education of local "cadres".

Among Aini's shorter works is his version of Dushen's story "The New Moon", which appeared in 1927 and depicted the tragic life of Tadzhik women bowed down by degrading oriental customs. It was in that year that the Party had launched its campaign against the wearing of the veil, a custom then still widespread in Tadzhikistan, and the whole question of the emancipation of women was brought to the fore. An interesting example of Aini's flexibility in adapting his writing to suit the requirements of Soviet ideology can be found in his story "The Death of a Moneylender". In the original version of this story the classic type of a miserly moneylender was created in the person of Kori-Ishkamba. The scene was laid in the old city of Bokhara and the miser's nefarious activities are confined to city-dwellers. The character of the miser is thought by some critics to have been modelled on Balzac's Gobseck, but whereas Gobseck died a natural death, Aini's villain dies of a stroke when he hears that the revolutionaries have nationalised the banks, thus removing his source of livelihood. Shortly after Aini's 75th anniversary, a new and entirely re-written version of "The Death of a Moneylender" was issued by the Tadzhik

State Publishing House. In the preface to the new edition, Aini mentions that the original version had been reprinted many times in Russian and Tadzhik; but the high praise with which it had been received had been accompanied by certain fundamental criticisms. He himself had come to realise that the scope of the story was too circumscribed and detached from the life of the people. He had therefore decided to enlarge the "geographic" limits of the narrative, and the activities of the moneylender were thus transferred from the town to the country; he was now represented as a village kulak, an octopus drawing into its deadly embrace the toiling masses of the peasantry and using every means further to enrich the kulaks, bais and other anti-social elements at the expense of the poor. The new rural milieu enabled Aini to describe with greater emphasis the brutality and primitiveness of life in the country, conditioned as it was by the strict application of the shariat (Muslim canonic law). This re-setting of the story is considered by Soviet critics to manifest the honest and straightforward approach of the writer to his professional responsibilities and to his duties towards the people, since in their opinion it made the story much more effective as a weapon in the struggle for communism. They are now clamouring for a translation of the new version into Russian.

Style and Language

The extent to which Aini's style and writing were influenced by those of Gorki is a theme frequently stressed in the many reviews and appreciations of the Tadzhik writer's work. The literary technique of Gorki as the forerunner of "Socialist Realism" has been accepted by all Soviet masters of literature, and it was adopted by Aini, particularly in the "Memoirs". The Gorki manner is clearly discernible in Aini's vivid description of the humdrum environment of all strata of society in the days before the Revolution, and in the way in which he brings to life types from the lowest depths of human existence.

Aini is universally regarded as the foremost reformer of the Tadzhik language, and here again he is considered to have been influenced by the prose of Gorki as well as that of other famous Soviet writers. Prose was in fact seldom used as a medium by pre-revolutionary Tadzhik writers, and the great gulf which existed between the flowery literary language and the simple and straightforward speech of the common people made the former largely incomprehensible. In order to provide a vehicle for the introduction to the Tadzhiks of the wealth of new life and culture brought into being by the Revolution, and for the primary function of a means of human communication, it was necessary to "democratise" the old literary language and to cleanse it of the foreign, largely Arabic and Persian, accretions which had accumulated in the course of generations. Aini was the prime mover in this campaign: in 1928, in an article entitled "The Tadzhik Language", he struck at the reactionaries who denied the independent character of Tadzhik. He consistently opposed the excessive use of Arabic words and expressions and the survival of grammatical forms acquired from the Arabic language. His attitude towards words derived from high literary Persian was no less radical, although at one time he suggested the

use of the spoken language of contemporary Iran as a medium for literary Tadzhik. All through his long life he has advocated the use of a clear, simple and universally understood idiom uncontaminated by local dialectal deviations.

Soviet reviewers frequently claim that Aini's name and reputation extend far beyond the borders of Tadzhikistan, and even of the Soviet Union. Apart from Russian, his writings are said to have been translated into English, French, German, Hindi and other languages. Copies of "Dokhunda" in Hindi have been seen on the banks of the Ganges, and the works of the great Tadzhik writer are said to be valued in China and Afghanistan, and even in England and France.

K I R G I Z I A

HORSE-BREEDING: A NEW TYPE OF ALL-PURPOSES ANIMAL

The horse-breeding industry of Kirgizia has an all-Union as well as a Republican importance: over a large part of the republic animal transport is the only practicable means of communication; this fact provides an incentive for the development of new breeds of animal which can be used not only in Kirgizia, but in other parts of the Union where motor or even wheeled transport cannot be used.

Current press reports on the progress of horse-breeding in Kirgizia display a number of shortcomings. On the one hand, there is evidence of considerable planning and initiative on the part of stud-breeders and scientists; on the other, there are many complaints of the conservatism and backwardness of the Kirgiz peasant in responding to the progressive means which are now at his disposal. The administration of the stud farms, particularly in the matter of inventories, leaves much to be desired. A number of cases of maladministration and deliberate falsification could be quoted, but the object of the present article is to collate the existing information on the successful development of a new breed of all-purposes Kirgiz horse designed to be used for military as well as civil purposes.

A recent article in "Sovietskaya Kirgizia" outlining the tasks confronting the horse-breeding industry of Kirgizia emphasised that the average Kirgiz breed is too small to fulfil the demands of kolkhoz and sovkhoz estates, or of the Army. Attempts to improve the breed go back to 1907, when a stud-farm and race-course were established by an enthusiast at Przhevalsk, a race club being inaugurated there in 1914. It is constantly maintained that mass improvement of the local breed only became possible after the introduction of collectivisation and the establishment of "trading" stud farms. In 1928, the average height of the Kirgiz horse was still only 131.6 centimetres. By 1937, a total of 30 stud farms and 15 training centres had been established, at which both the Don and the "riding" (verkhovaya) horse were extensively used for breeding purposes. A particularly successful farm was No. 54, which supplied the right material to other stud farms in the Przhevalsk, Tyup, Novo-Voznesensk and Dzhety-Oguz rayons. This farm's pastures are situated 1,800 metres above sea level and are stocked with thoroughbred Don horses. Another successful farm which has been mentioned is No. 145 at Talas, which has over 500 thoroughbreds.

The new breed has been created by the crossing of local mares with thoroughbred Don horses. Arabs, the Akhal-Tekin (standard Turkmen breed) and ordinary trotting horses have not been used at all. There are now 22,000 animals of the new breed in Kirgizia, including 787 stallions and 5,558 first and second grade mares used for interbreeding. The breed

is now considered to be established, and further development will be achieved by interbreeding from existing herds. The new horse has a strong constitution, tough tendons, hard-wearing hoofs and is well adapted to pasture grazing. It is equally suitable for saddle, pack or harness work and is expected to equal the best types of Soviet pack horse - the Lokai, Karabriiskaya and the Kabardinskaya breeds. Cross-breeding with Don sires has produced an animal whose appearance is far more comely than that of the Kirgiz dams. The average height of the newly bred mares is 149.9 centimetres, chest measurement - 181.3 centimetres, and metacarpus - 18.7 centimetres. Stud farm No. 113 in the Budenovsk rayon of the Talass valley has some mares whose height is 152.2 centimetres, chest measurement - 182.6 centimetres, and metacarpus - 19 centimetres. It is interesting to note that these mares are the offspring of Kirgizian mares whose height did not exceed 136 centimetres.

The new breed is well adapted for work in high altitudes where the atmospheric pressure and oxygen content are low. Its average walking pace in single harness with a load of 1,400 kilogrammes is 7 kilometres per hour, and its trotting pace with a 500 kilogramme load 17 kilometres per hour. Its maximum single harness hauling capacity is 6.5 tons (sic). The breed has acquitted itself well in long-distance journeys under pack over difficult terrain at heights up to 3,000 metres above sea level. In a 5-day endurance test, it beat a Don horse, covering a distance of 500 kilometres with rider, and equipment amounting to 100 kilogrammes, in 54 hours. In another test carried out on 24th June, a number of horses left Naryn stud farm No. 53, each carrying a total weight of 150 kilogrammes including the rider. In 11 hours they covered 110 kilometres of mountain paths, and almost immediately afterwards took part in a race of another 8 kilometres. They rested during the night, but returned to their starting point the following day. In 51 hours they had covered a total distance of 208 kilometres.

The new Kirgiz breed had also been tried out in race meetings. At one meeting held on 26th May, horses were entered not only by the 54th Issyk Kul, 80th Frunze, the No. 113 Kirgiz stud farms of Kirgizia, but also by the 96th Kurdai and 47th Kokchetav farms of Kazakhstan. The Cavalry Club of the DOSAAF (Voluntary Association for Co-operation with the Army, Air Force and Navy) and the Kirgiz Ministry of Health also took part in the races. The 1948 high jump record of 1 metre 60 centimetres, was beaten by a horse of the new breed by 22 centimetres. Other achievements by the new breed which have been reported in the Press include distances of 1,200 metres covered in 1 minute 30 seconds, 2,400 metres in 2 minutes 59 seconds, and 25 kilometres in 55 minutes 49 seconds.

THE BRANCH ACADEMY OF SCIENCES

The Kirgiz Academy of Sciences is not an independent body as in the case of Kazakhstan, but a branch of the Moscow Academy of Sciences. According to a progress report for 1952 presented to a meeting held last January by Professor Akhunbaev, the Chairman, there has been considerable progress in scientific work in Kirgizia, and the work of the Academy is now carried out by four special institutes and six research units. There is a total of 39 laboratories where 59 scientists with various scientific degrees are fully employed.

Emphasis on Practical Problems

From the Chairman's report it is evident that in Kirgizia, as in other Central Asian republics, the emphasis in academic study is more on scientific research as related to practical problems with a direct bearing on the development of Kirgiz economy than on the humanities and abstract studies. Among the practical problems tackled is the survey of the outcrops of sodium sulphate in the Tien Shan, which, it is thought, could form a valuable source of supply for the glass, sodium and general chemical industries of the U.S.S.R. As a result of the efforts made by the Botanical Section, it can now be presumed that the tea plantations in southern Kirgizia are established, since the plants have survived their first winter. The same section has provided a valuable contribution to the study of plant life in the Republic by compiling the fifth volume dealing with Kirgiz flora. Zoologists have achieved considerable success in their attempts to enrich the fauna of the republic by introducing and acclimatising such fur-bearing animals as the Teleutka squirrel, the Kolinski, the Ussuri badger and the Ondatra. Some of the lakes, too, have been stocked with trout from the Sevan Lake in Armenia.

New Research Units and Institutes

During 1952 a number of new research units were established. Apart from the Botanical and Zoological Institutes, there are now Institutes of Geophysics and Hydrology. During 1953, the last-named institute is to be expanded into an Institute of Hydrology and Power with nine laboratories. The zoological and parasitological units are also to be expanded into an Institute, while new units for the study of local diseases and of geography are to be added. According to press reports, the creation of an Institute of Hydrology and Power was made necessary by the number of technical problems that have arisen in connection with such big projects as the Orto-Tokoi and Big Chu canal projects. The Institute will also examine the coal resources of the republic, which are the largest in Central Asia, and the methods for their most effective and rational exploitation. A chemical research unit is to work in close co-operation with the Institute and will have the specific task of analysing the properties of the coal deposits. The principle is thus generally accepted that the future development of

Kirgizia's coalfields depends in large measure on preliminary survey and scientific research.

Problems of Fodder and Animal Husbandry

Last January the Moscow newspaper "Pravda" accused both Kirgiz and Kazakh scientists of paying scant attention to the whole question of fodder resources, the systematic development of which is of enormous importance to the animal husbandry of both republics. Frunze scientists have now admitted the justice of this accusation: only the Kirgiz geo-botanists have done any research along the right lines in their experiments with the sowing of fodder grasses in high altitude valleys, and in research work at Susamyr. Even this work was too academic and not properly related to the requirements of animal husbandry. These are very considerable, since the targets to be reached by 1955 involve increases of 18-20% for cattle, 60-62% for sheep, 40-50% for pigs and 10-12% for horses.

Associated with the problem of fodder is that of raising the productivity of the livestock kolkhozes. This is considered possible if all-the-year-round grazing is abandoned and the practice of stabling cattle introduced. In general, it is contended that the existing scientific means for the improvement of animal husbandry are far too limited - there are in fact only two laboratories served by five or six workers. It has now been decided that the laboratories of the Botanical Institute and of the Soil, Irrigation and Zoology research units, as well as the Institute of Geology and Chemistry, should all concentrate on the fodder problem, and last March a conference was held in Frunze of interested institutes and branches of the Soviet Academy in order to discuss ways and means of creating a stable fodder supply in Kirgizia. The conference was on an all-Union basis and included representatives from Siberia, the Ukraine, White Russia, Georgia, Komi and Daghestan. Practical steps have thus been taken to vitalise research on animal husbandry, and to give Kirgiz scientists assistance in organising a determined drive for the improvement of conditions in the republic.

The Humanities

The Institute of History, Language and Literature is continuing its study of appropriate subjects. In linguistics, work is proceeding apace on "An Introduction to the Comparative Study of the Phonetics of the Turkic Languages" which is shortly going to press. A Russian-Kirgiz dictionary will shortly be produced, as well as a volume of historical essays. The Dungans are being made a special subject of research.

During 1952 there were several open discussions on the subjects relating to the humanities, and one of these was devoted to the Manas epic. During this discussion, the organisation of research work on this outstanding monument of unwritten epic poetry was strongly criticised. Later it was announced that the discussions had helped research workers to formulate the right approach to the study of this work, of which the available texts

are now to be scientifically studied with the object of removing "accretions", and thus preparing the way for the issue of a revised "comprehensive" text. The possibility has also been mentioned of a complete edition of the works of Toktogul Satylganov and Togolok Maldo.

Lack of Co-ordination, and Staff Shortages

There has been a good deal of criticism of the Branch Academy's work and organisation. It is maintained that the work of the institutes and laboratories is not properly co-ordinated, and that insufficient attention is given to comprehensive research. Institutes work in watertight compartments and scientists are not sufficiently in touch with other scientific bodies in the Union, and even with the Soviet Academy of Sciences. There are many problems specifically affecting the development of Kirgiz economy in the solution of which the co-operation of eminent Union scientists is urgently required.

There have been detailed criticisms both of the existing staff of the Branch Academy and of the system of selecting and training new recruits. It is clear that the existing staff cannot cope with the work now being entrusted to them and research has often to be given to outsiders. An instance of this is the study of the economy of the Tien Shan region, which is at present being done by scientists who are not on the permanent establishment of the Branch Academy and are working on contract terms. The permanent staff is not up to establishment, and there are at the moment 59 vacancies for scientists and 18 for trained technical staff. At the same time, during the past few years 135 University-trained associates and laboratory assistants have been employed, but during the same period 111 of them have been dismissed. This results in many members of the staff holding more than one appointment; it is noticeable that many members of the permanent staff belong to the same families.

Selection and Training of Kirgiz Scientists

At a conference held at the Branch Academy in April 1953, the existing system of selection was discussed. The principle of selecting candidates not only on the basis of their Party reputation, but also on that of their general efficiency, has been disregarded in the past. This has resulted in the personnel of the Institute of History, Language and Literature becoming contaminated by socially undesirable elements who contrive to misdirect research on problems of literature, and to allow nationalist bourgeois tendencies to penetrate the work of the Institute. A similar deviation from a true scientific approach has been observed in the chemistry research unit; there has been a tendency to prefer the theories of foreign scientists to those of the eminent Russian scientist Butlerov.

The percentage of native Kirgiz among the research associates has always been fairly high. During the first five years of the Branch Academy's existence, out of 57 research associates 46 were Kirgiz, and during 1952 the percentage of Kirgiz was brought up to 93. But the selection and

training of Kirgiz recruits has not been entirely satisfactory. In 1947 and 1948, for instance, 15 Kirgiz completed their studies, but only 6 were able to write a proper thesis. Recently, however, there has been some improvement, and at present the Branch Academy has on its books 37 trainees, of whom 33 are Kirgiz nationals. Of the 37, 21 are doing post-graduate work in Moscow and Leningrad, and 16 in Kirgizia. Most of them are studying the humanities. It is expected that 12 will complete their post-graduate studies this year. The number of candidates still falls short of requirements; this is not because the schools of Kirgizia cannot provide suitable material, but because proper steps are not taken to discover and recruit candidates.

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EDUCATION

The all-Union Soviet Educational system involves compulsory education from the 7th to the 14th year. In theory, compulsory 7-year education was introduced throughout the Union in 1943. In fact, it does not appear to have been introduced in Kirgizia until 1949. There are three kinds of school depending on the size of the place where they are located: four-year or primary schools, seven-year schools and ten-year schools. Pupils passing out of a primary school in a rural district may pass on to the nearest "Middle School", a term which seems now to be applied somewhat loosely to classes five to ten inclusive.

Compulsory middle-school education

A Republican conference of workers in the field of education was held in Frunze in February 1953. Among other things, the conference discussed the feasibility of introducing compulsory ten-year education as a means of doing away with discrepancies in the educational levels of manual and white-collar workers. It is also believed that such an innovation would facilitate the introduction of modern production techniques and raise the output of industry. Compulsory middle-school education is to be introduced by the end of the current 5-year plan in Frunze itself, in all regional centres, and in the cities of Tokmak, Kyzyl Kiya, Sulyukta and Kok Yangak. To this end 47 new school buildings are to be put up and 155 seven-year schools opened. The registration of children of school age is to be strictly enforced, and at the same time steps are to be taken to ensure that children already attending school do not fall out before completion of their studies. Special attention is to be paid to the education of girls, the registration of whom has been very defective in the Osh and Dzhalal Abad regions. In the Aravan, Mirzaakin and Naukat districts, the attendance of girls is negligible, and in the higher forms of schools in these districts, girls

are scarcely to be found at all.

Compulsory Seven-Year Education

As already mentioned, compulsory seven-year training was introduced in Kirgizia in 1949. So far the results have not been entirely satisfactory. During the first half of 1953, not less that 17% of pupils failed to keep abreast of the curriculum, that is to say, to qualify for the next grade at the proper time. Much of the trouble is due to overcrowding in the schools. The Selo Groznoe (Talass) school, for instance, is attended by over a thousand children, who have to study in shifts, the first shift starting at 7.45 a.m. and the last working until 11 p.m. In this school, there is so little space for anything except the pupils, that books, maps and other visual aids have to be stored in one room, which causes great inconvenience to the teaching staff. There is no room for a library or reading-room, and no laboratories for practical work. These shortcomings naturally have their effect in the higher forms, and there have been complaints that graduates from middle schools entering the higher colleges of the republic are ill-prepared to pursue their advanced studies, being usually backward in chemistry, physics, mathematics, biology and in the Russian language. At present many pupils, even in the tenth class, cannot write a composition in Russian. A particularly deplorable feature is that in classes above the fourth, relatively few Kirgiz girls are to be found.

Teachers

There have been a large number of references to the low level of teachers' qualifications. In the Tonski rayon, 89 teachers were found to be without middle-school graduation certificates, and in the Kulanak rayon (Tien Shan) 43 teachers had no documents of any kind to prove their qualifications as teachers. In the Naryn rayon, only 7 out of 218 teachers have had a University training and only 73 have graduated from teachers' training colleges. A serious evil is the widespread practice of transferring teachers rapidly from one school to another. Teachers are sometimes transferred without any consideration of their qualifications. A teacher of Kirgiz literature may be ordered to teach Russian, and a master of history, mathematics. In one instance, geography was being taught in the eighth and tenth classes by a teacher who had himself only had ten years of schooling and had not specialised in geography. There is a shortage of 800 teachers of Russian in the republic, and of many teachers of foreign languages as well. As a result, in seven schools in the Tonski rayon, Russian is not taught at all.

Female Education

In an article which appeared in the February issue of the magazine "Rabotnitsa" (The Woman Worker), some description is given of the existing arrangements for the higher education of girls and for the training of women teachers. More than 1,000 women are now working in cultural institutions, colleges and technical secondary schools as teachers, and 2,145 as primary school teachers. A number of girls are occupied in post-

graduate work, scientific research and in the preparation of theses. Altogether, more than 50,000 girls are attending primary, seven-year and secondary schools in Kirgizia.

The women teachers' training Institute is the most recent higher educational institution in the town of Frunze. It was created in 1952 and now consists of five faculties:- 1) Physics and Mathematics; 2) Natural Sciences; 3) Geography; 4) History; and 5) Language and Literature. The scientific workshops and laboratories have been equipped with modern apparatus. Provincial students are accommodated and fed free of charge in a hostel. More than 400 girls are now working at the Institute and in the eighth to tenth classes of the secondary school attached to it. The majority of the students are Kirgiz, some of them from the remotest mountain districts such as Tien Shan, Issyk Kul and Southern Kirgizia.

In Osh there is another so-called Girls' Pedagogical Institute, where 300 Kirgiz girls are trained in nursing and midwifery. In other towns and rayon centres in Kirgizia, there are other hostels for girl students at secondary schools. These are intended for Kirgiz girls passing out of primary schools in the rural areas to continue their education at secondary schools and the University.

New Textbooks

To improve the teaching of Russian and scientific subjects, new textbooks are at present being prepared, including a Russian-Kirgiz school dictionary and a new book on Kirgiz literature for use in the eighth to tenth classes. Logarithmic tables are to be adapted for use by Kirgiz pupils. Attempts are being made to standardise the Kirgiz literary language by doing away with the many differences in spelling which occur in the territorial dialects. In order to decide the numerous controversial spelling issues, a new orthographic dictionary is considered to be a paramount necessity. The first Kirgiz dictionary in the Latin character came out in 1938, and a later edition in the new alphabet (Cyrillic) was published in 1942. Both these editions have become obsolete, and in 1948 a decision to prepare a new one was made, but so far nothing has been done. The Russian-Kirgiz school dictionary is also being subjected to serious delays. It was written in manuscript form in July 1950, but so far the State Publications Office has been unable to find an editor to complete the work.

Polytechnic Education

The press is now actively discussing means of achieving a higher level of polytechnic training. This clearly presents grave problems since most schools are entirely without visual aids to enable teachers to illustrate their oral instruction and to train their pupils in a practical approach to physics and other scientific subjects. Apart from the scarcity of these aids, there is a grave shortage of teachers qualified to act as demonstrators in the methods of applied science.

Sidelight on Cultural Conditions

A sidelight on cultural conditions in Kirgizia is provided by statistics showing the extent of the work handled by the Frunze General Post Office. In a single normal day, 18,000 letters were received and 20,800 despatched. 18,300 newspapers and magazines were received. 550 parcels and 600 postal orders were received and 500 parcels and 770 postal orders despatched.

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LITERATURE

(During the period under review there has been a marked change in the hitherto harshly critical attitude towards modern Kirgiz writers. The bulk of the following article was written on the basis of material appearing in the Press from 25th March to the middle of April. The new tendency made its first appearance on 2nd June and is described in a "Postscript".)

A conference held in Frunze in March to discuss literary matters has occasioned a great deal of Press comment on this subject. The special purpose of the conference seems to have been the stimulation in Kirgiz writers of interest in questions relating to the function of literary criticism. Other subjects which have aroused the interest of the Press have been the need for gaining inspiration from the great masters of Russian literature, and thus for the more intensive study of Russian, the improvement of the standard of translation of masterpieces both from Russian and Kirgiz, and the treatment and selection of subjects by Kirgiz men of letters.

Literary Criticism

One of the themes developed at the March conference was the need for a more critical attitude towards literary work in general, this being frequently below the high standard set by Soviet literature. Derogatory references were made to an "Outline of Soviet Kirgiz Literature of the Past 25 Years", by Kerimdzhanova. This, although intended as a treatise on the development and formation of Kirgiz literature of the Soviet period, included no critical analysis or appreciation of the principal works of Kirgiz writers, or of the influence of Russian classical and Soviet writers. The same author had previously written on the influence of Russian literature on the writings of Tokombaev, and had incorrectly stated that the influence of Russian literature could only be traced from 1934. In fact, modern Soviet Kirgiz literature was of much earlier origin, and its development ran in the main parallel to

the development of modern Soviet literature, and displayed the same trends as the Russian classics. The conference voiced the opinion that a more virile form of criticism might have helped to purge the writings of such Kirgiz authors as Malikov and Tokombaev of tendencies to glorify the past life of Kirgizia and to eulogise the bais and manaps of feudalism.

Need for Study of Russian Masters

Apparently no attempt has so far been made to study the difficult problems of Kirgiz literature in the light of Stalin's approach to language and literature. In order to raise the quality of literary criticism, Kirgiz writers are advised to study the classical writings of Russian masters of literary criticism such as Belinski, Chernyshevski and Dobrolyubov. In the absence of a healthy standard of criticism and critical approach to the value of their publications, the ideological level of Kirgiz writers tends to become stratified and lag behind the times, instead of keeping abreast and marching in step with the vanguard of the communist movement. In the present circumstances, it is not surprising that during the past two years not a single outstanding literary work has appeared.

The study and appreciation of literature by Kirgiz writers depends to a large extent upon their knowledge and understanding of Russian. At present the standard of Russian study in Kirgiz schools is low, and students often finish seven years of schooling without having acquired a working vocabulary, or any ability to translate Russian sentences. Pupils recently arriving from schools in Suzak, Achinsk and Leninsk to continue their studies at Dzhalal Abad, were unable to carry on a fluent conversation in Russian; their vocabulary was restricted to 300-500 words, although the school curriculum stipulated a vocabulary of 6,000 words; such knowledge of Russian literature as they had had been acquired through the medium of the Kirgiz language, and they were unable to understand Russian literary masterpieces in the original. The shortage of teachers of Russian is largely to blame for this state of affairs, and one means of overcoming this shortage is an intensification of the teaching of Kirgiz in Russian schools.

Translation

The standard of translation from Russian and from Kirgiz is considered to be unsatisfactory. Here again there is an absence of constructive criticism. Two volumes of Tolstoy's "War and Peace" have been translated into Kirgiz, but their appearance caused no stir and found no echo in the Press. The translation was, in fact, far from perfect, and criticism might have helped the translators to improve the quality of their future work. The Russian Section of the Writers' Union is evidently inefficient; the important task of translating Kirgiz literary masterpieces into Russian is not being properly handled and is often entrusted to persons selected on the basis of friendship rather than ability. There is no proper programme of work, translations frequently being prepared in a hurry to coincide with jubilee dates.

Treatment and Selection of Subjects

Although it is admitted that some improvement has occurred recently, the tendency of Kirgiz writers to harp on outworn and feudal themes is constantly referred to at conferences and in the press. At the 6th Party Conference held last autumn, serious criticism was levelled against the well-known writer Tokombaev. His development as a poet during the past thirty years has been unequal, and he is still creating works which are open to objection. Although he has been warned in the past by the Party, his poetry still displays tendencies towards nationalist ideology. So far from realising his mistakes and creating works describing the strenuous life of a Soviet citizen, he steadily ignores criticism. His latest collection of poems published in Moscow contains verses impregnated with ideas of decadence, abstract contemplation and pessimism. Tokombaev's persistent reluctance to improve is said to be due to the feeble way in which the Association of Kirgiz Writers has reacted to his deviation. Had the Association launched a virile campaign of criticism, Tokombaev's aberrations might have disappeared.

Many other Kirgiz writers have been attacked on the same grounds. Malikov has been strongly criticised for his poem "Balbai", in which, under the pretence of reconstructing popular national themes, he has not only idealised the feudal society of the past, but has failed to dwell upon the magnitude of the social and economic reforms which transformed Kirgizia and were carried out under the guidance of the Soviet people. It is the duty of Kirgiz writers to familiarise themselves with the historic paths along which the Kirgiz people have marched hand in hand with the Soviet People, and to dilate upon the development of the material and spiritual forces since that friendship was established. Otherwise, misunderstandings and aberrations are bound to persist, as for instance in the novel "Pishpek 1918", by Chekmenev, a writer whose complete disregard for criticism and refusal to improve have excited strong disapproval.

Some Kirgiz writers, however, are beginning to develop a more realistic treatment of their subjects and to reveal the actualities and achievements of Communist thought. Among such writers are Sydykbekov ("Our Contemporaries"), Baiyalianov ("Happiness") and Baitemirov. These have selected as the main theme of their writings the life of the Soviet people and their efforts to build a classless communist society. These improvements were noted at the Plenum of the Soviet Writers of Kirgizia held in Frunze last April, but it was at the same time stated that although many Kirgiz writers are singing lustily of the white-capped mountains of the Ala Tau, their muse speaks only in a feeble voice when it comes to depicting the great socialist transformation through which the Kirgiz people are passing; they omit to describe the new Soviet breed of people who are everywhere working and struggling to achieve the common ideal of communism.

Apart from the tendency towards a fundamentally wrong approach, Kirgiz writers are apt to make mistakes in their treatment of specific aspects of Soviet economy. In a recent novel devoted to the subject of the so-called "Agro" cities, the writer, so far from describing the efforts of kolkhoz members

to raise productivity, which must be the main objective of any kolkhoz, keeps emphasising the need for improvements in living conditions and luxuries. Such an attitude is liable to undermine the whole conception of socialist reconstruction: an ideal society cannot be based on selfishness and luxury, but only on the proper understanding by its members of their duties towards the State.

Stalin's Works in Kirgiz

A Kirgiz translation of Stalin's "Economic Problems of Socialism" appeared last October and the complete impression of 20,000 copies has been sold out. A new impression of 50,000 copies was being prepared during the second quarter of 1953.

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Postscript

During June there has been evidence in the Press of a new attitude towards modern Kirgiz literature. The 9th Plenum of the Union of Soviet Writers of the Kirgiz Republic has declared that it is precisely the harsh and biassed attitude of critics which has debased the principles of decent literary criticism, and has been instrumental in destroying the normal conditions necessary for the survival of native talent. It is now emphasised that during the short period of thirty years which comprises the whole literary tradition of Kirgizia, there have come to the fore such gifted poets as Tokombaev, Shibaza, Malikov, Umetaliev, and masters of prose like Sydykbekov, a Stalin prize-winner. Some of the works of these writers were published in Moscow and favourably reviewed, especially after, like Tokombaev, they had revised some of their ideologically faulty works. Critics of the Kochnev school, however, persistently harked back to earlier editions, the defects in which had long since been admitted and repaired. Such past errors are of less importance than the hitherto impregnable fortress of false criticism which has been strangling the development of Kirgiz national culture under the cover of distorted Party directives.

To what, it has been asked, do the so-called errors of Kirgizian writers amount? Some of the older generation have admittedly been uncritical in their descriptions of the past. They have lauded the khans, manaps and reactionary akyns (bards); they have scarcely attempted to criticise bourgeois-nationalist ideas; and at times they have displayed a failure to understand the radical social and economic transformation undergone by the Republic during the years of Soviet power. It is true that in 1935 Tokombaev published a novel in verse about the 1916 rising, which was impregnated with bourgeois-nationalism, pan-islamic and pan-turkic ideas. Malikov, too, had in his time published a heroic poem on the Manap Balbai, who in 1916 proved himself to be a rabid reactionary intent on defending the class interests of a feudal aristocracy. In 1944, Umetaliev published a poem idealising Basmachi counter-revolutionaries and depicting the exploits of Soviet Army heroes with far less sympathy. But all these writers had

long ago confessed their sins, which should not now be brought up against them. The critics, however, continued to demand their repentance, and their new compositions were reviewed in the light of their past errors. The fault of the critics lay not so much in the fact that they had revealed writers' shortcomings, but that they had exaggerated them. While stigmatising as "terrible" accidental and petty slips of the pen, they had overlooked or minimised much colourful description and interpretation of life. This harsh criticism amounted to a reign of terror, a veritable "massacre of the innocents". Moreover, such critics as Samaganov, Baltin and Nurov, who in their day had helped the Party to disclose the harmful activities of certain bourgeois-nationalist and diversionist elements, had later used these revelations for purposes of "political speculation".

Some critics are adepts at making mountains out of molehills. A description of a prize at a horse-race won by some doughty cavalier would be ascribed to a predilection of the writer for the glories of the past. Any indication of admiration for female beauty would be stigmatised as revealing a retrograde mentality. According to the "Party" critics, a bride should be selected not for her beauty, but on the basis of her social services and usefulness to the community. Marriage should only come after suitable references had been obtained from a kolkhoz accountant or on the recommendation of a Komsomol meeting. All such criticism should now be relegated to the dustbin, and it was hoped that the young literature of Kirgizia would rise phoenix-like from its ashes and cease to be mesmerised by harsh criticism and threats of administrative compulsion for petty deviations.

An example of the new approach to individual writers can be found in the critical appraisal of the selected poems of Tokombaev recently published in Moscow. The review points out that Tokombaev's eventual achievement of the spirit of socialist realism has been tortuous and by no means easy. Some poems still disclose ideological errors such as the tendency to advocate the doctrine of non-resistance to evil, for which Tokombaev is mildly rebuked. There is also a disparaging but perfunctory mention of the stereotyped language of his earlier times: roses, nightingales and the moon, and clichés used by him during the war, such as "the soul of a noble lion" or "his eyes burned fiercely as he had been a lion"; but it was emphasised that such errors of theme and style had been abandoned by the poet as he grew to full maturity. They were in any case trivial matters which should not be harped upon, or allowed to distract the reader from the beauty of Tokombaev's later poems translated now for the first time into Russian, poems on sunny Kirgizia, and on Moscow, the city in which he felt so much at home.

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THE STUDY OF HISTORY

The study of Kirgiz history, both ancient and modern, is a subject which engages the almost constant attention of the press. Although the importance of ancient history is recognised, the stubborn interest displayed by most Kirgiz scholars in the remote past is strongly deprecated.

The Yenisei Inscriptions

The veteran Russian turcologist, Malov, has recently published a new book on the Yenisei inscriptions. The book contains the texts and translations of inscriptions which have so far been found on the tombstones of warriors, heroes, clan-leaders and of the Kirgiz nobility. The inscriptions are of considerable importance from the linguistic point of view, and, in addition, reveal certain aspects of the social and economic structure of Kirgiz society of the 5th century. They throw light on the unequal structure of this society and even provide some indication of the link which the ancient Kirgiz may have had with their neighbours, the Chinese. Malov's work represents the labours of several years and is of great value to scholars studying the period, who have previously been obliged to use translations which, as Malov is at pains to explain, contain many misrepresentations of fact.

The first section of the book contains reproductions of the inscriptions from the Yenisei river basin first published at the end of the last century by Academician Radlov, the second, the inscriptions originally published by Malov himself and now augmented by texts from a collection made in the Tuva region, and the third, the Kiselev inscriptions. In this way, all the available texts from the Kirgiz homeland in the Yenisei basin are brought together in one place.

In his preface to the texts, Malov assumes them to be of Kirgiz origin and also that in the 5th century, the Kirgiz people constituted a powerful state situated in the Yenisei valley, which even rivalled that of the Uigurs. The Kirgiz may not have been the sole inhabitants of this region and most likely shared it with the Karagasy, Uryankhai and Soiny tribes. From a linguistic point of view, however, this is of minor importance, since all these tribes presumably shared a common language; the Kirgiz were the predominant partner in this conglomeration, and probably imposed their language and culture on the others. Malov insists that the language of the inscriptions was that of the ancient Kirgiz, and he maintains that its rudimentary grammatical structure and vocabulary were in the main similar to the Kirgiz language used today. But he makes the reservation that a language of the 5th century could not possibly have possessed the richness and refinement of a modern tongue.

A press reviewer of Malov's work does not agree with his chronology and thinks that the inscriptions should more properly be related to an extended

period of 300 years between the 5th and 8th centuries. He also quotes the contention of another scholar that there are actually no linguistic facts to support the identification of the language of the inscriptions with modern Kirgiz. No conclusion has so far been reached about the date and possible basic similarity of the texts of the inscriptions to modern Kirgiz, and Malov himself has stated that these problems cannot be finally cleared up until further tomb inscriptions are found and deciphered.

Modern Kirgiz History

The modern or Soviet period of Kirgiz history is being accorded a great deal of attention by Russian writers who, while admitting that Kirgiz scholars have made a certain amount of progress in historical research, deplore their preoccupation with the remote past. It is maintained that the readjustment of the approach to historical research and problems in the light of Stalin's teachings is still proceeding in too leisurely a fashion, and that previous misconceptions are being too slowly rectified. At the 6th Party Conference the more glaring errors and shortcomings in the works of Kirgiz historians were shown up. These errors include the wrong interpretation of the national struggle for liberation, of the incorporation of Kirgizia within the orbit of the Russian Empire, and a refusal to admit the existence in the past of class consciousness and class contradictions within the framework of the Kirgiz economic structure. No comprehensive Kirgiz history of the Soviet period has so far appeared, but on 21st March 1953 a preliminary meeting of historians decided to call a conference to discuss the plan and publication of an "Outline of History of the Kirgiz SSR". This "Outline of History" will deal with the national liberation movement of the second half of the 19th century, the 1916 rebellion, conditions in Kirgizia during the first World War, and the first revolution of February 1917. It will also include chapters on the Yenisei and Tien Shan periods of Kirgiz history.

Meanwhile, there has been a detailed discussion on a collection of essays, published some time ago under the title "25 Years of the Kirgiz SSR". Although not devoid of errors, this publication is a valuable contribution to Kirgiz history, and it is all the more remarkable that it has not been reviewed in the Kirgiz language by Kirgiz historians, although it was their obvious duty to do so.

The task before the authors of "25 Years of the Kirgiz SSR" was to describe how, under the guidance of the Lenin-Stalin Party, the Kirgiz people had been welded for the first time in history into a single Socialist nation. In the opinion of press reviewers, this task has been correctly conceived by the authors, but the way in which it has been executed falls far short of requirements. The book records the victory of the Great October Revolution, the struggle to establish the power of the Soviets, the facts of the Civil War, the formation of the Kirgiz state, the introduction of the Five-Year plans, and the eventual efflorescence of Kirgiz culture within the Soviet system. But the actual process leading up to the consolidation of the nation has not been fully described, and the main factors which contributed to the final success of this consolidation are not properly indicated. The outstanding

shortcoming of the book is its failure to admit and emphasise the fact that the Kirgiz people could not have overcome their backwardness and become a Socialist nation without the outside help received from the great Russian people. The authors have indeed paid lip service to this and such epithets as "great" when referring to Russia have been liberally employed; but the steady and determined help afforded by the Russian people is nowhere fully brought out. On the other hand, much space is devoted to a detailed description of anti-Soviet activities; the origin of bourgeois-nationalist tendencies, the Basmachi insurrection and the activities of counter-revolutionary groups and their leaders are all dealt with in full. Very little attention is paid to the industrialisation of Kirgizia, or to the vitally important part played in it by the national minorities (e.g. the Russians).

Teachers and the "Big Brother" Theme

The foregoing criticism is in line with certain precepts formulated for the guidance of teachers of Kirgiz history of the Soviet period. It is the duty of such teachers to demonstrate the economic, political and cultural roots which have in the past led to the establishment of close friendly relations between the Kirgiz and their elder brother, the great Russian people. They must show how this friendship was finally established in the course of the revolutionary struggle for liberation; and they must prove beyond doubt the "progressive" significance of the incorporation of the non-Russian peoples in the Tsarist Empire. This progressive significance was recently re-emphasised in an article in the Moscow "Kommunist" by Bagirov.* The author insisted that the youth of non-Russian peoples must be educated in a spirit of esteem and love towards the Russians, and this spirit should be clearly infused into the teaching of history. At the same time, the pitfall of lauding Tsarism and its colonial policies must be avoided. Tsarism ignored the people, but was eager to join hands with the upper strata of the Kirgiz people, the local bais and manaps, who, in their turn, were not against becoming identified with Tsarism and establishing an unholy alliance with the Tsarist administration. When interpreting the facts of the "incorporation", therefore, it should not be concealed that Tsarism was the greatest foe of all the peoples of the Soviet "fatherland" and consequently the foe of the Kirgiz.

The formula of "the lesser evil" is now apparently considered as having served its purpose and is replaced on the basis of numerous historical facts and documents by emphasis on the "beneficial" character of the "incorporation". In addition, the historical origins of the friendship of all the peoples of the Union is to receive the fullest attention, with particular reference to Kirgizia. Historical terms and definitions of processes and events need much revision: such words as "conquest" and "subjugation" applied, for instance, to Siberia, are to be eliminated from textbooks as they have been borrowed from the vocabulary of bourgeois historiography.

* Bagirov, formerly Secretary of the Executive Committee of the Communist Party of Azerbaijan, has since been dismissed from his post.

THE NEW ORTHOGRAPHY OF THE KIRGIZ LANGUAGE

On 6th June, the Kirgiz language newspaper "Kizil Kirgizistan" and its Russian counterpart "Sovyetskaya Kirgizia" published the text of an order of the Presidium of the Supreme Soviet of the Kirgiz SSR "confirming" the orthography of the Kirgiz language. The order sets forth in detail the orthography which is to be used as from 6th June 1953. In the preamble to the order, which quotes extensively from Stalin's "Marxism and Problems of Linguistics", a summary is given of the differences between the new orthography and that hitherto in existence. These differences are as follows:-

1) The order of the letters in the alphabet has been changed in so far as the special symbols е, ү, ң follow those letters from which they are derived, i.e. о, у, н, instead of appearing in an isolated position at the end of the alphabet.

2) Russian loan-words containing ц and щ must be written with these letters, and not with тс and шч instead.

3) ь at the end of Russian loan-words must be dropped when a suffix is added to the word.

4) When a suffix is added to Russian loan-words ending in consonant clusters such as ск, км, фт, нк, a vowel must be inserted between the word and the suffix.

5) In the orthography hitherto in use, Russian loan-words taken into Kirgiz before the October Revolution could be written either in a form which brought them into line with the Kirgiz phonetic structure, or in the Russian orthography. In the new orthography, only the latter is permissible.

6) Certain new rules are established for the use of capital letters and hyphens.

Apart from the text of the Order, both newspapers have leading articles on the subject of the new orthography. The articles treat this matter as one of outstanding importance. They begin by tracing the history of Kirgiz writing: in 1924 the Arabic alphabet was adapted to the requirements of Kirgiz and it was in the Arabic script that the first Kirgiz newspapers and books appeared; in 1928 the Arabic alphabet was replaced by the Latin alphabet as being simpler and more conducive to the liquidation of illiteracy; finally, in 1941 the Russian script was introduced. It was only after the adoption of the Russian alphabet that the creation of a stable orthography became possible.

Owing to the fact that the new orthography was not firmly enough established or made available to the public in a satisfactory form, mistakes in writing and printing were numerous. A committee was therefore formed in the Communist

Party Headquarters to study the whole problem of orthography. Between 1948 and 1951 this committee considered the various aspects of the problem in the light of the views and requirements of the Kirgiz branch of the Academy of Sciences of the U.S.S.R., of linguists, and of the scientific establishments and higher educational institutions of the town of Frunze. At a meeting held on 23rd March 1953, the Institute of History, Language and Literature of the Branch Academy of Sciences presented the draft of an "Orthography of the Kirgiz Language" which was considered point by point by the committee and finally agreed upon.

The newspaper articles emphasise that in the new orthography the basic principles of the orthography introduced in 1941 have been preserved. These principles are summarised as follows:- "First, the establishment of uniformity in the spelling, both in Russian and in Kirgiz, of all the words introduced into the Kirgiz language after the Great October Socialist Revolution. It was precisely for this purpose that an alphabet constructed on the basis of the Russian script was adopted for Kirgiz writing. Secondly, due regard for the specific characteristics of the Kirgiz language. Thirdly, the principle of not turning the system of Kirgiz writing into a transcription: it is well known that no single orthography can cope with the problem of establishing the pronunciation of all words, for the pronunciation of certain words cannot always coincide with their spelling in Kirgiz.

Editorial Note: With regard to the spelling of Russian loan-words used in Kirgiz, the leading articles only mention those words taken into the Kirgiz language after the Revolution. The Order, however, specifically lays down that Russian words used in Kirgiz before the Revolution must now be spelt as in Russian. It is noteworthy that in the article by Professor N.A. Baskakov summarised in No. 1 of the Central Asian Review it was recommended that pre-revolutionary loan-words should continue to be spelt according to the phonetic requirements of the language which used them.

T U R K M E N I S T A N

ASHKHABAD

It is now nearly five years since an earthquake destroyed part of the city of Ashkhabad and devastated some of the neighbouring rural districts. Immediate help was received from all parts of the Union, from the neighbouring Central Asian republics and from Azerbaijan, Georgia and the Ukraine; but the task of reconstructing the city has naturally devolved upon the inhabitants themselves. By 1950, there were already signs of considerable recovery, and the streets were once more full of traffic. But there is still much to be done, and last autumn it was admitted that as a result of the damage done by the earthquake, the current Five-Year Plan could not be fulfilled. The city industries are apparently working to full capacity, but most of them are still housed in temporary buildings.

Despite the magnitude of the task facing the republic of Turkmenistan, much has been done to restore, and even improve upon, the previous condition of this, the most southern capital of the Union. For passengers arriving by the Moscow express, the panorama of the city begins to unfold soon after the train has passed the station of Anau. On the outskirts of the town are the buildings of the modern mechanised Glass Works, which are provided with a well-laid-out workers' settlement consisting mostly of two-storey houses built since the earthquake. This settlement has a luxuriant park, a swimming pool, shops, a post office and a "polyclinic". To the east of the railway line lie the new Diesel locomotive repair workshops - a product of the Five-Year Plan, designed to extend the existing extensive maintenance facilities. A little further on are the railway waggon repair workshops and the ice factory. Between the glass works and the brewery buildings there is a veritable socialist town composed of complete blocks of dwelling houses.

Achievements and Projects

The city of Ashkhabad stretches from East to West, the main "Svoboda" street being seven kilometres long. Development seems to be following the stereotyped east-west pattern; but there is some expansion in other directions, notably in the south-east, where industrial buildings, including the new Shoe Factory, are being put up on overgrown waste-land only recently included in the city area. This factory, which is to be completely mechanised, is due to be opened during 1953. Other buildings to be erected during the current Five-Year Plan include a knitted goods factory, a pumping station, power and transformer sub-stations, repair workshops and trust offices.

Great changes are projected for the Stalin quarter of Ashkhabad. A new station, railway administration buildings and a three-storey railway building have been planned. The station is to cost four million roubles and particular mention has been made of the fact that the station waiting-

rooms are to be provided with cushioned settees, of which 200 have already been supplied to the railway. The railway square is to be planted with trees. The railway technical institute and "Communication Centre", now under construction at the junction of the Oktyabr and Svoboda streets, are expected to become the most attractive examples of architecture in the city. Many new settlement blocks are still springing up in the Stalin district, and the thirty streets traversing it are now being asphalted.

Building carried out during the past two years includes 100,000 square metres of domestic housing, 17 new schools and several hotels and post-offices. Buildings planned to be completed during the current year are four hospital buildings to house the Medical Institutes, four technical institutes, a Dynamo Club and certain offices of the Ministries of Agriculture, Land and State Control.

Public Services and Amenities

Mention is made of a sum of 2,800,000 roubles to be spent in 1953 on bringing conditions more in line with the cultural needs of the people. It is not entirely clear exactly what services this sum is intended to cover, but it evidently includes the provision of such "luxuries" as greenhouses and the planting of trees and gardens within the urban area. Other amenities planned include the reconstruction and re-surfacing of the Svoboda, Oktyabr, Komsomolsk and Gogol streets, and six kilometres of "aryks" are to be reconditioned. (Note: This presumably refers to water-channels within the city used for domestic irrigation and water supply.) No specific mention has been made of improvements to the actual supply of water, which constitutes a serious problem for the city of Ashkhabad. The same applies to the supply of electricity, about which there have been numerous complaints. There have been occasions when no light was available for weeks on end, and in certain quarters of the town it is only available too late at night to be of any use.

The problem of ice-supply has now been solved, and ice is now available in unlimited quantities. Ice-boxes, however, are quite unobtainable, and although a small number of electric refrigerators can be purchased, these are beyond the means of the bulk of the population.

Shortcomings and Delays

The Press has published many detailed and vigorous attacks on the various trusts and organisations responsible for reconstruction and building. Most of the shortcomings are attributed to the absence of strict control by the higher central authorities, to the low standard of technical personnel, and particularly to the low level of mass political propaganda. The building trusts are accused of neglecting political and uplift work; and it is alleged that socialist competition drives have not been properly organised and are largely of a perfunctory character. Results of these drives are not properly verified, and are hardly ever properly discussed. Progress Recording Boards are not always maintained on construction sites. Visual propaganda

is at a very low ebb, and where it exists little attention is paid to it. On the Academy of Sciences building site, for instance, there was a placard calling upon workers not to waste cement. But it was precisely on this site that loose cement was lying about everywhere, and getting mixed up with dirt and other rubbish. Apparently more attention is paid to the storing of newspaper stands, which should be on display, than to the storing of cement, which should not be left in the open.

As a result of shortcomings in the field of propaganda, labour productivity in certain building organisations has dropped to 47.6%. Many instances are quoted. Initial capital funds for the building of the Turkmen Academy of Sciences were allotted some time ago and work should have begun in 1952. At the beginning of 1953, however, no serious start had been made with the work or even with the final clearing of the building site. The main difficulty seems to have been the accommodation of the people inhabiting houses on the proposed site. There were delays in building alternative houses for them, and in one case people had refused to move into a building allotted to them because there was no electric supply, a defect which could have been remedied by the erection of two poles outside the building. More recently, however, greater progress has been reported and concrete mixers are said to be already in operation on the site.

There have been many delays in the building of the theatre designed to accommodate 800 people, in the Svoboda street opposite the Gosbank. Two million roubles are to be spent on this work during 1953. But the pace of building is slow, and it is doubtful whether this amount can be utilised to the full in the course of the current year, in spite of the fact that drawings for work to the extent of half a million roubles have already been supplied. 25 draughtsmen of the Giproteatr (State Theatre Projects) are working in Moscow on the final drawings and are expected to complete them by July. The estimated cost of the whole project is 9,600,000 roubles.

During the past four years, building has been completed on about a quarter of a million square metres of ground, but by no means all of it has been delivered to users in proper condition. Even the building of factories has at times been faulty: the walls of the Shoe Factory have become warped, and the concrete work on the first floor shows a defective finish. Woodwork and joinery is often badly executed: the construction of windows, doors, verandas and stairs in a 14-flat apartment house constructed by the Turkmenpischestroi were generally defective. (Complaints about the quality of construction are not confined to Ashkhabad; similar criticisms are made of work carried out in Nebit Dag and Kazandzhik, and are mostly attributed to the absence of proper control by architects and engineers. For over two years, no construction inspectors have visited Chardzhou.)

The work of the Institute of Anti-Seismic Construction is evidently unsatisfactory. In theory, this Institute is responsible for testing the properties of all building material, but in practice it at times refuses to carry out laboratory work on samples, and it has even failed to compile proper instructions on the behaviour of concrete and stone work under seismic conditions

in hot climates.

(Editorial note: It is of some interest to compare the above with an article on Ashkhabad which appeared in the June 1953 number of Soviet Union, an illustrated propaganda magazine published in Moscow in various languages for foreign consumption. This article makes no mention of the earthquake, or of the repairs and reconstruction which it entailed.)

COMMUNICATIONS IN TURKMENISTAN

During the first half of 1953, the press yielded comparatively little information on the subject of communications. There were few references to the working of the railway, but slightly more prominence than usual was given to the subject of aviation. The only roads mentioned were those connected with the construction of the Main Turkmen Canal. Of these the Takhia-Tash - Krasnovodsk trunk road is evidently regarded as a key project. Bulldozer, scraper and grader operators who gained valuable experience on the building of the Volga - Don Canal have been employed on this road.

It is noteworthy that, during the second quarter of the year, there was virtually no mention of the work of excavation on the Main Turkmen Canal. The last direct reference to this was the detailed description of the opening of the Feeder Canal in March.

The Ashkhabad Railway

The first Economic Conference on Railway Affairs was held in Ashkhabad in March. It called for a fuller mobilisation of latent reserves of production and for the exercise of more stringent economy, which would involve the cutting of all "unproductive" current expenses. The Conference placed on record that there was little evidence of any sustained effort to economise in materials, and that the equipment of Diesel depot workshops was not being used in an effective or rational manner. Since the convening of this Conference, the personnel of the Ashkhabad railway have undertaken to exceed their planned target for the current year. In May they undertook to carry out loading and unloading to the extent of 3% in excess of the plan, and to reduce the turnround of trucks by two hours. Transportation costs are to be lowered and an economy of 10 million roubles achieved. All running repairs to Diesel engines are to be completed by 5th December, the average daily run of a Diesel locomotive is to be increased by 5 kilometres, and one million tons of freight are to be carried in excess of the planned target. Statistics given of plan fulfilment in 1952 show 110% for loading, 114% for grain haulage, 110% for oil, but only 97% for cotton.

Generally speaking the line seems to be working normally. In April, locomotive staffs undertook to increase the haulage of trains by 100 tons, and the average daily run by 10 kilometres. They also undertook to achieve a fuel economy of 3%. In the first half of April, the Ashkhabad Diesel depot moved 100 trains of above average weight, carrying 15,000 tons in excess of planned targets. The summer passenger timetable is now in force. As in last summer, a through train now runs from Krasnovodsk to Stalinabad; passengers can reserve seats on the train, and there is the additional amenity of a coach for mothers travelling with their children. The coaches of this through train are well equipped and provided with radio amplifiers. The introduction of this train has done away with the tedious 24-hour wait at Kagan junction and, for the comfort of passengers from Urgench to Tashkent, a through carriage is now attached to the Tashkent - Krasnovodsk mail.

There has been no increase in speed, and the Moscow expresses from Ashkhabad and Stalinabad keep with slight variations to their old time-tables. (Note: The line to Stalinabad is regarded as being part of the Ashkhabad railway.)

Kizyl Arvat Repair Workshops

A good standard of achievement is reported from the Kizyl Arvat Waggon Repair Workshop, where Stakhanovite workers are constantly striving to reach higher production levels. The Diesel Repair Workshops are also showing good results: the normal distance run by Diesel locomotives without overhaul is 50,000 kilometres, but this distance is now being substantially increased, and a case is mentioned of an engine which has already run 101,000 kilometres without overhaul; its locomotive brigade do not intend to turn it in until another 10,000 kilometres has been run. The distance normally run before replacement or major repairs to Diesel engine shafts is also being greatly increased. It is nowhere mentioned what this distance is, but one engine (No. 15) is reported to have exceeded the prescribed norm by three times in the course of a year and a half, and to be still in working condition. In contrast to the Kizyl Arvat Workshop, the Mary depot has been singled out for strong criticism. Achievements here are constantly below average, and to avoid disorganising work along the entire line, spare locomotives have occasionally to be sent to Mary from other depots. Conditions at Mary are said to be chaotic and the standard of completed repairs very poor.

Stations and Amenities

There are varying reports of the state of stations and sidings. The station at Repetek has been favourably commented upon. It has the appearance of an oasis with an abundance of elm and mulberry trees. The railway staff at this station are even playing their part in the conquest of the desert. In the past accidents have often been caused in this section by sand-drifts, but now the drifting sands have been subdued for a considerable distance from the station. Plants have been grown along "barkhan" ridges and across depressions, and, where no trees would grow, sand protection fences made of dried plants and grass have been erected. Repetek has also a fine record for loading operations; these are extensive as the station serves the adjacent quarries from which coarse gravel is supplied to the entire Ashkhabad railway.

Elsewhere on the Krasnovodsk section, conditions are less satisfactory. At siding No. 13, for instance, little is being done to create normal working conditions. The construction of living quarters is proceeding at a very slow pace, and there are no cultural amenities such as newspapers and magazines, and radio. Even more disturbing is the fact that this siding has not been provided with an adequate supply of repair tools and railway equipment.

Loading and unloading operations

Statistics for the turn-round of trucks during 1952 showed an excess of 7 hours over the prescribed time of return. After the usual spurt in January, there was a serious falling-off in loading and unloading operations, with the result that during the year the railway had to pay considerable fines for delays in handling freights. The carrying out of night work was particularly bad, loading being down to 25% and unloading to 30-32% of the norm. The low standards of night work even affected the scheduled departures of trains. Among defaulters mentioned were the Kizyl Arvat repair workshops (15,000 roubles in fines over a period of four months), the Dzhebel Salt Trust, the Mary cotton-ginning mills and the Bairam Ali oil and fat combine. The delays in unloading were by no means confined to small consignees. Even such a large concern as "Turkmentekhsnabneft" (Turkmenistan Technical Oil Equipment) could not unload quickly enough the considerable cargoes consigned to it. During a period of four months last year, for instance, the Trust had to pay the Ashkhabad railway over 100,000 roubles in fines. The Trust sidings are well equipped for the rapid handling of cargoes, facilities including a 25-ton crane. But these are often idle owing to bad organisation, and there is unnecessary recourse to manual labour.

The handling of cargoes at Krasnovodsk port leaves much to be desired. Loading operations are carried out most negligently; for instance, in a barge travelling from Krasnovodsk to Cheleken, 60 tons of metal were thrown on the top of a load of bricks, resulting in 30% of the latter being damaged. Wooden frames are often loaded beneath heavy machinery, window glass is not properly stacked, and bales and crates are often thrown about and seriously damaged.

The Chardzhou - Kungrad Branch Line

Increase in traffic is reported on the Urgench - Khodzheili section, where the track is already in a condition to allow for the regular movement of scheduled passenger trains. It is even predicted that there will soon be through trains running between Khodzheili and Tashkent. Regular passenger traffic is to be opened on this section on 1st May and a train will reach Khodzheili four times a week. South of Khodzheili, work on the main track is continuing, including ballasting. In April, gangs of mechanics were reported to be working on the so-called third sector in preparation for the building of the track from Shumanai northwards to Kungrad.

There have been frequent references to the work in progress on the station buildings at Urgench. The station building was due to be completed by 1st May. The ornamental motifs are being carried out by the best artisans of Khiva, the same who had carried out the decoration of the Navoi Theatre in Tashkent. The waiting-rooms, rest-rooms and restaurants were due for completion by 1st May. Passenger stations are also being built at Tashauz, Shavat, Lavak and other sidings.

On those sections of the line already open to traffic the average speed of trains has been somewhat improved, and it has been found possible to increase

the haulage weight of trains by 100 tons. Meanwhile there are already complaints that the fullest use is not being made of the facilities provided by the new railway. The district is now connected by rail with the oil supplying centres, but the first and second Khanki M.T. Stations, probably for good reasons of their own, are still reluctant to use the railway to bring their fuel supplies. They continue to send their road-tankers from Khanki to Urgench, thus wasting fuel which could have been used in their motorised machine parks. On the other hand, the Khanki Ginning Mills are now having their oil requirements routed direct to Khanki station.

The Chardzhou - Kungrad branch line now has its own newspaper in the shape of "Stakhanovets-Stroitel", which represents the management, the political department and the committee of the building cadres.

Civil Aviation

In spite of difficult meteorological conditions, civil aviation now operates in Turkmenistan the whole year round and has been considerably expanded. Apart from ordinary passenger and freight services, aircraft have been used to service the great project of the Main Turkmen Canal, to carry urgent cargoes, food supplies and even water. It has recently been announced that between 1940 and 1950 the volume of freight and passenger carriage rose by 174%, and in the first two years of the Five-Year Plan by 142.2%. During the past two years, aircraft serving the Main Turkmen Canal have carried 6,000 passengers and several thousand tons of cargo. During 1952, aircraft were used in the canal zone for sowing saxaul on 2,500 hectares of desert land along the Daryalyk.

A summer time-table for passenger services was to be introduced from 15th May; it includes daily flights to Moscow and Tashauz, weekly flights to Chardzhou and occasional flights to Mineralnye Vody in the Caucasus. Tickets can be purchased five days in advance and military passes available for railways are now valid on the airlines on payment of the difference in the cost of tickets. Recently, civil aviation operators undertook to cut freight charges by 2% per ton-kilometre.

Civil aircraft carry out a large number of special tasks. Such aircraft are mostly piloted by young members of the Komsomol. Tasks performed for the medical services include ambulance work in outlying districts, the conveyance of medical personnel for such urgent missions as operations, blood transfusions and X-ray work, and even for the delivery of special instructions on matters relating to public health. Other tasks include catering for fishermen on the Caspian Sea, for the oil-workers of Cheleken and in the sulphur mines. Flights for work of this kind are not only organised in the capital, but also from regional centres such as Tashauz. During February of this year, some of the best crews were used for the delivery of publicity material and voting-papers in connection with the local election campaign. In the course of a few days Turkmen pilots transported about 1,500 kilogrammes of mail and about one ton of packages to Kizyl-Atrek, Hasan-Kuli, Tashauz

and sulphur mines in the desert.

(Editorial Note: All reports on Civil Aviation are derived from issues of Turkmenskaya Iskra appearing between 6th February and 17th May 1953. References to the use of civil aircraft in connection with the Main Turkmen Canal project are confined to February issues of the paper.)

K A Z A K H S T A N

MAINTENANCE AND CONSTRUCTION OF ROADS

In April 1953, a three-day republican conference of road transport workers was held in Alma Ata. At this conference, a general outline was given of road-transport conditions prevailing in Kazakhstan. Special emphasis was laid on the rapid growth of passenger and freight road transport, and the statement was made that thanks to the construction of thousands of kilometres of new trunk road and to the increased supply of vehicles and equipment, the freight now carried over the road network in Kazakhstan was double that carried by the railways. (Note: No reference to distance was made in this statement, and it may include the short-distance cartage of freight.) It was also announced that during 1952, 190 kilometres of new roads and 1,500 linear metres of bridge surface had been built; superficial repairs were carried out on 17,000 kilometres of roads, and many thousands of kilometres had been subjected to major repairs. The existence of ten well-equipped Road Construction Stations had resulted in road-excavation work being mechanised to the extent of 92%, and the loading and unloading of building materials for road construction to 85%. The amount of work carried out by road-gangs has been stepped up by 11%. During 1953 a bid is to be made for the complete mechanisation of road building and repair work.

Projects and Achievements

Road projects for the current Five-Year Plan include the construction in Kazakhstan of 1,700 kilometres of new motor roads and of 11,000 linear metres of bridging. In addition, many hundreds of kilometres of existing roads are to be permanently repaired and temporary roads properly surfaced. Only scanty details are available of work already undertaken, but it appears that in addition to the mechanised Road Construction Stations, kolkhoz labour gangs are being extensively used on the 45-kilometre stretch of road connecting the regional centre of Akkul with Uguk. Labour from at least 9 kolkhozes is being employed, and 30 kilometres of the road have already been surfaced with gravel. It is claimed that during the past two years 300,000 square metres of streets in Alma Ata have been paved and asphalted, and mention is made of similar improvements in Dzhambul.

Road Construction Stations

In spite of ample supplies of scrapers, graders, bulldozers and excavators, the work of these stations does not seem to be properly organised. In the current year only 17 out of 60 graders are in operation, and only between 30% and 40% of the available scrapers and bulldozers are being used. Delays in beginning projects are attributed to the Ministry concerned: in May work was to have started on the building of a road to connect Karaganda with Karkaralinsk. Owing, however, to the Ministry's failure to produce estimates, no efforts have been made to accumulate road materials, and in

June the work had still not been started.

Favourable mention was reserved for the Road Construction Station at Taldy Kurgan, where road mechanics had some experience in advanced methods of road construction and have consequently more than fulfilled their planned tasks. So far, no attempt has been made to place their experience at the disposal of other stations.

Shortcomings

There have been complaints of transport breakdowns in many localities, especially on the roads serving such new settlements as Ablaketka where the road to Ust Kamenogorsk is in a deplorable state, rendering the regular and safe movement of motor transport quite impossible. Buses are continually breaking down on this route, and in some places the road is even impassable for carts. Many of the track-roads and bridges in the Aktyubinsk and Akmolinsk districts are reported to be in an advanced state of disrepair. For instance, near Selo Vishnevka, in the Akmolinsk district, there are two small rivers which have still not been properly bridged; as a result, grain-trucks frequently break down. The absence of bridges in this locality will seriously affect the rush transportation of grain during the coming autumn season.

THE EMBA OIL-FIELDS

During the period under review, press reporting on the subject of the Emba oil-fields has been more concerned with production processes, equipment, and social amenities than with the actual output of oil. Considerable attention has been devoted to the resuscitation of disused oil-wells, "secondary recovery", as it is called. There has been favourable mention of the friendly co-operation between Kazakhstanneft and Sredazneft. There has been a constant exchange of experiences and ideas, and during 1952, a delegation from Sredazneft spent a month visiting the Kulsary, Karaton, Koschagyl and Sagiz fields in order to study methods of high-speed drilling. At the beginning of the year considerable damage was caused to the Emba fields by spring floods, which threatened many roads, causeways and well-approaches. In spite of precautions, some of the Makat wells were flooded, and their clearance necessitated increased pumping operations which resulted in a rise in the cost of production.

The Sagiz, Dossor and Kulsary fields

Sagiz came first in the spring production competition and has accordingly attracted more attention than any other field. By comparison with results attained at the beginning of the year, Sagiz has raised its output by six tons a day and lowered the estimated cost of extraction. Following the example of their Azerbaijan colleagues, Sagiz oil-men have decided to exploit technical means of extraction to the utmost. As part of this plan, standard diameter bottom hole pumps have been replaced at two of the wells by pumps of a smaller bore. This minimises damage to the sucker rod, and lengthens by three times the period for which equipment can continue to work without overhaul. By this means output has been raised by one ton per 24 hours. Drilling operations have been greatly speeded up with the result that well No. 147 became operative in 15 days' drilling as against the normal period of one month. On some days 225 metres have been drilled, and a record achievement of 1,470 metres for the month was finally established. On 26th May, it was announced that Sagiz had completed its five months plan one week ahead of time. Some 20 old and disused wells had been brought back into production and output raised by 15%. It is claimed that 80% of the Sagiz wells are now operating on a high technical level, and by comparison with the beginning of the year, have increased daily output by 10 tons. As a result, the cost of oil produced at Sagiz is now one rouble and ten kopecks cheaper per ton than before.

Dossor. This is the oldest of the Emba fields, having been in operation for over 50 years. It dates back to the time when oil was brought from Dossor to Astrakhan and Orsk on the back of camels. Estimated reserves are still high, but it is admitted that the yields have become somewhat less. To maintain output it has now been decided to increase underground pressure at some of the wells by the operation of water-injection. Powerful new equipment including pumps of a larger diameter has been introduced, and this has resulted in thousands of tons of additional oil being brought to the

surface. The SKN 5 pumping jack with a stroke of two metres is also being used at Dossor. Some of the existing wells have been entirely reconditioned. For instance, Well No. 160, which has been in existence for over 25 years, had recently decreased its output owing to the appearance of sand bottlenecks requiring clearance every 10-15 days. The whole pipe installation has now been changed, and the interval between overhauls increased to 45 days.

Kulsary. Natural gas is now being produced in this field and is used for both industrial and domestic purposes. A gas main and distribution network has been established for the supply of gas to dwelling houses, mechanical workshops and brick-kilns. Kulsary is the second settlement of the Emba fields to use natural gas, the first having been Kashkara. Pressure indicators are now in use at Kulsary, thus enabling pressure to be maintained at depth.

Secondary Recovery

In their efforts to achieve and surpass the demands of the Five-Year Plan, Emba oilmen are mobilising all the latent reserves of their fields. These include secondary recovery, or the resuscitation of disused and partly abandoned wells. This has already been widely practised at Dossor and Makat and this year its application is to be extended. In addition to the method of pumping water through new injector bore-holes in order to boost the required underground pressure, a new kind of filter has been perfected to prevent contamination of wells and to improve the quality of the oil. The water-pumping method is to be introduced at Koschagyl, Sagiz, Kashkara and Baichunas, but at the older Emba wells, where the oil strata are not too deep, the "shaft" method is being adopted.

Drilling

There have been many reports about the acceleration of drilling operations. This acceleration is attributed to the first-class technical equipment provided by Soviet industries, the most notable innovation being the device known as the Turbobur (Turbo-Drilling Bit). The Turbobur was first introduced in the Emba oilfields in 1952. It has been used at a number of fields, among those mentioned being Munaili, Karaton, Baichunas and Kulsary. Its use, combined with a more carefully worked out drilling procedure, has resulted in the doubling of drilling rates at many wells. In 1951, average monthly results were only 500-600 metres, rising in exceptional cases (Well 426) to 811 metres, this having been achieved only by drastic changes in the normal procedure. While the old method of drilling was being applied at Well no. 424, the load on the bit did not rise above 5 or 6 tons, the pumping rate being 14-16 litres a second with one pump working at 40-45 strokes per minute. The mechanical speed of boring under these conditions did not exceed 2.6 metres per hour, and the monthly total, attained with some difficulty, was 590 metres. In drilling Well 420, the load was brought up to 7 tons and the revolutions of the rotor to 280 with both pumps in use at 60 strokes per minute, thus enabling the

mechanical speed to be doubled. In working Well 468, all previous errors were carefully considered and eliminated, and as a result, the drilling rate was brought up to 1,389 metres per single unit per month. It is now considered as proved that the speed of boring is directly related to the quality of the drilling mud, and to the operation of "ZIS" pumps, not by the SAP-1, but by a more powerful motor, thus enabling a fuller use to be made of the Turbobur. The highest speed so far registered has been at Well No. 189 at Kulsary. Six motors of the B2 - 300 type are in use here and drilling is done from beginning to end by Turbobur, the load on the bit and the pressure of the pumps being raised when working at depth. In January 1953 the mechanical rate of boring at this well reached 8.28 metres per hour, monthly drilling results averaging 1,450 metres per unit-month (stanko-mesyats).

Demulsification

Demulsification is one of the many methods used for improving the quality of the oil and is now being applied at Sagiz. A form of this process was introduced at Sagiz several years ago, but it was not a success. A new process has now been developed and it was recently tried out on an industrial scale, from necessity rather than by design. Owing to extensive repairs being carried out at Sagiz and Kashkara, there was an unavoidable accumulation of stocks. These had to be worked, and the Kazakhstanneft Trust ordered processing to be done not at Sagiz, but elsewhere. To avoid this, however, it was decided to try out the new process of cold demulsification. It was a pronounced success, and the necessity of having the oil pumped to other plants was thereby eliminated. The new cold process has many advantages: it is much simpler and cheaper, since it does not require the use of boilers and effects great economy in chemical re-agents, power, water, etc.; the new process enables the production of high-quality oil to be carried on throughout the year, and, indeed, improves the quality by preserving the lighter fractions of oil. So far, the new process has only been applied at Sagiz and Kashkara without any expert assistance from Kazakhstanneft. It is estimated that by this means alone an economy of 1½ million roubles has been effected.

Social Amenities

There has been some criticism of the quality and number of shops and market stores at the Dossor field, there being only 26 shops and stores and these mostly located in the Kolkhoz market. The needs of the population of Districts Nos. 2, 3, 7 and 52 are not provided for locally, and the workers there have to walk many kilometres to do their shopping. During the past 7 years only three new shops have been opened and many of the existing ones are badly in need of repair. The stocks in the shops are quite inadequate, being distributed from central warehouses without any regard to the specific needs of customers. For instance, there are stocks worth thousands of roubles of buttons for naval uniforms, horse-shoe nails, reins and similar articles, none of which are of any use to the local communities. Although there is an abundance of fish at supply bases,

it is scarcely available in the market, since distribution is only made to one stall open for 3 hours during the day.

There have also been criticisms of the system of distributing bread supplies at the Iskininski and Komsomolski fields.

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CENTRAL ASIA AND THE RUSSIAN PEOPLE

During the past few years, Soviet publications have steadily reflected official dissatisfaction with the way in which Central Asian writers as a whole, and historians in particular, have treated the general theme of the friendship subsisting between the people of Central Asia and their "elder brother" the Russian people. In an article on Kirgiz literature which appeared in No. 2 of Central Asian Review notice was taken of an apparently new and more lenient attitude towards the past aberrations in this respect of Kirgiz writers. While it is too early to say whether this new attitude foreshadows a new policy, and one not confined to Kirgizia, it may be of interest to review some of the historical evidence which has in the past been adduced by Soviet writers in support of the thesis that throughout the Tsarist domination of Central Asia, there was never any manifestation of racial enmity towards the Russian people, and that the incorporation of Central Asia within the Russian Empire was a matter of historically progressive significance.

One of the most specific and frequent complaints which have been levelled against Central Asian historians is that while they have only dealt perfunctorily with the part played by the Russian people in liberating the peoples of Central Asia from their feudal overlords, they have described in great detail the various revolts which have taken place in Central Asia, and particularly that of the Basmachis, and have even tended to speak admiringly of the exploits of some of the rebel leaders. Accordingly, Soviet writers have been at pains to retell the story of these revolts in such a way as to throw discredit on the feudal aristocracy and religious leaders, and also on the agents of foreign powers, all of whom are alleged to have tried to exploit the revolts in their own interest.

The Russian Conquest of Central Asia: its historical significance

Since the Revolution, and even during the past few years, Soviet treatment of the general theme of Russia's relations with the people of Central Asia, has displayed a good deal of variation. The main vicissitudes through which Soviet historical theory on this subject has passed were summarized in a letter written by M.V. NYECHKINA and published in the April 1951 issue of Voprosy Istorii. Until 1930, the generally accepted theory was that propounded by the school of the historian Pokrovski. According to this theory, the incorporation within the Russian Empire of such adjacent nations as Georgia, Armenia, and those of Central Asia, was an "absolute evil" (absolyutnoye zlo). Doubts about the correctness of this theory were first raised in 1930 and took shape in a decree issued by a Government Commission in 1937 to the effect that the incorporation was not an absolute evil; in view of the benefits conferred on the annexed territories by their

association with Russia, it should be regarded as "the lesser evil" (lit. the least evil - naimen'sheye zlo). In her letter Nyechkina developed the theory that even the expression "the lesser evil" was, in some cases, too negative and tended to minimize the positive benefits which were, she claimed, so great as to render the use of the word "evil" quite inappropriate; dialectically speaking, the incorporation should be considered not as "something evil" but as "something good" (dobro).

The September 1951 issue of Voprosy Istorii carried the report of a discussion on the "character of national movements in Central Asia and Kazakhstan during the Colonial Period" held in Tashkent University in March 1951. In a paper read by Professor Dodonov, an attempt was made to divide these movements into the two categories of reactionary, feudal-monarchical movements, and national liberation movements. Later, at a joint session of the chairs of Marxist-Leninist Principles and of Soviet history in the Central Asian State University, a resolution was passed on the subject of Professor Dodonov's paper and the discussion which followed it. This resolution declared that "The conquest of the Central Asian khanates by Russia, in spite of the cruelties of the colonial yoke imposed by Tsarism, had for the peoples of these khanates an objective and progressive significance. This significance has to be considered in the light of a comparison with the hard circumstances in which those people had lived previously; and also in the light of the lot which would have awaited them in the event of the establishment in Central Asia of British or German imperialism, or of their pan-Islamic agents". In dealing with Professor Dodonov's description of the various movements, the resolution disagreed with his views about the progressive character of the 1898 Andizhan Revolt, which it described as "reactionary".

The Andizhan Revolt of 1898

Since 1951 there has been a tendency to abandon the doctrine of the Lesser Evil (see C.A.R. No. 2. p.47) and to develop still further the notion of the long-standing friendship between the peoples of Russia and Central Asia. In speaking of the various movements and revolts which have occurred in Central Asia, any possibility of their having been prompted by or given expression to anti-Russian sentiments, that is, racial antipathy for the Russian people, is vigorously discounted. In the February and March issues of Voprosy Istorii (1953) special attention was given to the revolts of 1898 and 1916, the first of these being treated as reactionary, and the second as progressive. It is noteworthy that for the present less is being said about the revolt led by Kenesary Kasymov (1837-47) except that it must now

be regarded as a reactionary, feudal-monarchical movement. In the History of the Kazakh People published by the Kazakh State Publishing House in 1943 specific mention had been made of "the progressive role and significance of the struggle for freedom led by Kenesary Kasymov", who is described as "a hero of the Kazakh people."

The article on "The Andizhan Revolt of 1898" is by B. GAFUROV, the author of a "History of the Tadzhik people" (1949). In the course of his article, Gafurov states what is presumably the current official view on the whole subject of Russia's and the Russian people's relations with the people of Central Asia, namely, that, "Many historians of Central Asia, and especially those writing before the great Patriotic War (i.e. 1941-1945), have correctly pointed out that Tsarist Russia was a prison of the various people inhabiting it. But these same historians have not examined the matter dialectically: they have overlooked the second and decisive side of the incorporation of Central Asia with Russia - its progressive and historical significance. They have taken insufficient account of the fact that in the economic sense Russia was, by comparison with Central Asia, a more highly developed country where capitalist conditions had already taken shape and assumed control. Consequently, when Central Asia was joined to Russia, industry began gradually to develop there, primarily in the fields of cotton-ginning, oil production and the like. This development of industry, and the emergence of workers from among the local nationalities, was an important step forward in the economic life of the country. It was also highly important that as a result of her union with Russia, Central Asia began to be drawn into the orbit of world trade, and thus contributed to the development of her productive forces. A most serious error made by many Central Asian historians is that they have forgotten that, as a result of its incorporation with Russia, Central Asia came into direct contact not only with reactionary Tsarist Russia, the Russia of the Romanoffs and their minions, but with the Russia of the great Russian people." Gafurov admits that on page 444 of his history he made the same "glaring political mistake" as other historians in finding that the 1898 revolt "served, in essence, as a school for new endeavours on the part of the masses, and in particular for the Central Asian revolt of 1916." He attributes this mistake to three factors: "First, the failure to appreciate the progressive, historical significance of the union of Central Asia with Russia; secondly misunderstanding of the political significance of the emergence of Dukchi Ishan (the leader of the 1898 Revolt); and thirdly, insufficient understanding of the reactionary character of Sufism." He then proceeds to elaborate these factors in considerable detail.

Gafurov attributes the failure of the short-lived uprising

in Andizhan to the following: "The greater part of the population execrated Dukchi Ishan for his "provocation" and regarded him as a mere adventurer. The masses had no sympathy with the objects of the revolt, and they understood that the slogan of "Holy War" was directed not only against the Tsarist administration, but against the Russian people as a whole. At the time in question the establishment of a union between the toilers of Turkestan and the Russian workers, peasants and intelligentsia had already begun." Gafurov says that many documents are available which prove the foregoing, but he gives no particulars of them.

Gafurov gives a highly derogatory account of the character and "machinations" of Dukchi Ishan and he strongly criticises the way in which he is idealized by the authors of the "History of the Peoples of Uzbekistan" (Tashkent 1947). Finally, he vigorously attacks the whole nature of the Sufi orders and their activities throughout the Muslim world, and asserts that, "At the present time, the Anglo-American imperialists are using the ideology of Sufism for the purpose of deflecting the toiling masses of the East from revolutionary activity. Many indisputable facts prove that spies, diversionists and 'agents provocateurs' are being recruited by the imperialists from among the followers of Sufism in order to suppress movements of national liberation." He does not, however, say what these facts are.

The Revolt of 1916

The 1916 revolt was far more widespread and therefore of far greater importance than that of 1898. All historians are agreed that the rising was precipitated by the issue of an imperial ukase calling up the able-bodied male population of Central Asia for military duties behind the line. As regards the underlying causes and objects of the revolt, however, there has been a good deal of difference of opinion, the extent and course of which it is of some interest to examine.

As in the case of Gafurov's article on the 1898 revolt, what is presumably the current official view on the rising of 1916 can be found in the article on the subject by A.F. Yakunin and O.K. Kuliev (Voprosy Istorii 1953 No. 3). This view is summarised as follows: "The revolt of 1916 suffered defeat, but for the peoples of Central Asia it constituted a serious school which prepared the oppressed peoples of this area for their struggle, hand in hand with the Russian people, for Soviet power, for the dictatorship of the proletariat, and for their own complete liberation from the imperialist yoke and from the bondage imposed by the feudal bais." In the course of their long article, the authors attempt to demolish all previous theories and arguments, and particularly those tending to suggest that the

revolt was in any sense an expression of animosity or racial feeling against the Russian people.

It is not, of course, possible to analyse all the great mass of material on this subject which has appeared in Soviet publications since the Revolution. It may however be of interest to refer briefly to two widely separated accounts. The first is to be found in an economic and geographic review of Central Asia by Ilias Alkin (Moscow 1931). In his account of the 1916 revolt, Alkin quotes at length from the report of General Kuropatkin, who was Tsarist Governor General of Turkestan at the time, and he expresses his agreement with the latter's view that although the revolt was touched off by the military call-up, it had its origin in deepseated economic causes for which the administration and the Russian settlers were to a great extent responsible. He quotes Kuropatkin as saying: "During the past 30 years we have not drawn any closer to but further away from the native population. The result of this has been disturbances over the provision of labour, bloodshed, havoc, mutual hostility and mutual lack of confidence." Alkin makes no mention whatever of any contact between the rebels against Tsarist authority and the workers of Russia, but he does specifically mention the attacks made on Russian settlers not only in Transcaspia (Turkmenistan), but also by the Kazakhs and Kirgiz.

The second and much more detailed account of the 1916 revolt which it will be profitable to examine is that by Yu. Tarasov in an article in No. 9 of Voprosy Istorii, 1951. This article which, unlike Gafurov's article previously mentioned, contains copious references to documents and sources, deals only with the revolt in Turkmenistan; but that it differs fundamentally from the general conclusions reached by Yakunin and Kuliev in their article written less than 2 years later can be seen from the following extract: "The peasants who rebelled against Tsarist Russia had no revolutionary programme. They had no quarrel with 'their own' khans or with the feudal and patriarchal Turkoman nobility. They had no revolutionary leaders and no contact with the Bolsheviks. All the hatred which the peasants cherished for the colonial regime was directed, under the influence of reactionary leaders, against the Russians as a whole; it did not distinguish between the Tsarist administrators and the remainder of the Russian population. This was clearly evident in the course of the attack on Tedzhen on the night of the 6th October 1916, when, the rebels, under the leadership of Aziz Chapykov, and armed with rifles, revolvers, swords, axes, knives, sticks and stones, advanced on the town of Tedzhen with the object of destroying not only all the officials of the Russian Government there, but the whole Russian population." Later Tarasov says: "The 1916 movement in Turkmenistan prevented the establishment of a single front between the toilers of Turkmenistan and the Russian working class; the movement was anti-Russian." Tarasov is, however,

at one with Yakunin and Kuliev in partly attributing the revolt to Persian, Afghan and British agents, and in vilifying Dzhunaid Khan for the part played by him.

Yakunin and Kuliev, so far from accepting Tarasov's view that the 1916 revolt was a demonstration of anti-Russian feeling, insist that, whatever might have been the immediate causes of the revolt, it was only made possible by the contact which had already been established between the Russian people and the toiling peasants of Central Asia. The writers claim that ever since the 1905 revolution, Bolshevik agitators had been at work in Turkestan and succeeded in organising strikes at the outbreak of the 1914 war. They assert that any anti-Russian manifestation which might have occurred during the course of the revolt took place at the instance of various elements who were intent on exploiting the revolt in their own interests, and who were in fact anti-Russian. These elements consisted of certain highly placed officials of the Tsarist administration, many of whom were, it is stated in the article, in the pay of the German and Turkish Governments, the feudal and religious aristocracy who were in the pay of the Turkish, Persian and Afghan Governments, and agents of the British Government which, although Britain was the nominal ally of Russia, was anxious to lose no opportunity of undermining the latter's authority in Central Asia. Mention is also made of American agents operating in Central Asia for the same purpose. But although a great deal of space is devoted to describing the machinations of these elements, the authors are careful to emphasise that they were only contributory causes of the revolt of which the main stimulus was the mass discontent of the peasants with the Tsarist colonial administration, and that in this they made common cause with their brothers, the workers of Russia.

In the latter part of the article a special attack is made on a book entitled "The National Movement in Turkestan" by Abdullah Redzhab Baisuni (Istanbul, 1945). This book, it is claimed, aims at distorting the "national liberation" character of the 1916 revolt and its link with the Russian liberation movement. The author, himself a "Basmachi" emigré, is criticized for trying to prove that the revolt, and the counter-revolutionary Basmachi movement of 1921 belonged to the same series of events and constituted the "single stream of the struggles of the peoples of Central Asia against Russian domination." Baisuni apparently asserts that the "1916 revolt had for its slogan 'the elimination of the Russians from Turkestan and the creation of an independent life in a free state' and that it was thus the precursor of the nationalist movement which received the name "Basmachi".

The Current Soviet Version

The views set forth in Voprosy Istorii of February and March 1953 may be summarized as follows:-

Because of the economic and cultural benefits resulting from the association of the people of Central Asia with the people of Russia, the conquest of Central Asia and its incorporation in the Imperial Russian Empire must be regarded as an historical event of progressive significance. At any rate since 1898, the Central Asians cherished a feeling of friendship for the Russian people as distinct from the Tsarist administrators, and the traditional feudal and religious leaders, all of whom combined together to oppose the real interests both of the Russian people and of the people of Central Asia. The 1898 Revolt was reactionary and unprogressive since it was organised by a religious leader working in collaboration with Pan-Islamic and pan-Turkic agents. The Revolt of 1916, on the other hand, was progressive since it was organised by the people themselves in collaboration with the workers of Russia and was directed, not against the interests of Russia and the Russian people, but against the Tsarist administrators and the feudal aristocracy. Many of the Tsarist administrators were in the pay of Russia's enemies and tried to exploit the revolt in their own or foreign interests. The declaration of Holy War made during the course of the Revolt by certain religious leaders was spurious and inspired by foreign powers. Similarly, the Basmachi Revolt of 1921 was a counter-revolutionary movement organised by the enemies of Russia and the Russian people.

The foregoing version of Russian relations with Central Asia during the past 55 years is represented as being based on historical facts and any deviation from it is stigmatized as "falsification". Many of these "facts", however, are unsupported by any documentary evidence, and this is particularly noticeable in the charges of treachery and foreign espionage brought against individual Tsarist generals and administrators. The theory that the 1916 Revolt was aided and abetted by Britain appears to be derived from undocumented statements to the effect that Britain had always wished to occupy and colonize Central Asia and used the embarrassment of the Tsarist Government in 1916 to further her designs. Yakunin and Kuliev mention the Dardanelles Campaign as a further indication of Britain's treacherous intentions towards her Russian ally. This campaign, they allege, was primarily designed to prevent the Russian occupation of Constantinople.

The views summarized above seem to mark a definite stage in

Soviet historiographical policy. It is not yet possible to say whether the tendency to "play down" opposition to this policy noticed last June marks the beginning of a new stage.

MANPOWER: ITS SELECTION, ORGANISATION AND PERFORMANCE SEEN IN RELATION TO EFFICIENCY & PRODUCTIVITY

II

MANPOWER IN INDUSTRY

The following is the first part of the second article in the series of articles on manpower begun in No. 2 of the Central Asian Review. The second part dealing with training projects, and other measures taken by the authorities to improve the standard of skilled labour, will appear in No. 4 of the Central Asian Review.

Although agriculture still holds the first place in the economy of the Central Asian republics, the provision of manpower and skilled labour for the greatly expanded industry of the area presents a far more formidable problem. The Central Asian press gives great prominence to the progress which has been achieved in industrialization and in industrial output, but no attempt is made to minimise the serious difficulties and shortcomings which are apparent in almost every branch of industry, and the extent to which these are postponing the full realisation of Central Asia's industrial potential. Chief among the difficulties with which Soviet planners have to contend are the shortage of experienced administrators and technical workers, the so-called "fluidity" of native labour, and last but not least, the rarity of the required combination of technical ability with political integrity and rightmindedness.

The general impression gained from Soviet publications is one of considerable achievement in spite of difficulties, and of sustained but by no means uniformly successful effort to remove these difficulties. It should be noted that one of the factors which prevent an accurate assessment of national or native achievment in the administrative and technical branches or industry is the absence in Soviet publications of any clear indication of the relative parts played by native and non-native (Russians, Ukrainians and others) elements.

PRODUCTIVITY OF INDUSTRIAL MANPOWER

The Soviet press and other Soviet publications dealing with Central Asian industry are accustomed to treat the whole matter of industrial achievement and productivity in terms of manpower, that is to say, of the standard and proper utilization of skilled labour. There is not unnaturally a marked difference between the reports on productivity intended for foreign, and to some extent all-Union

consumption, and those contained in the local press. In the latter, the emphasis is chiefly on the formidable difficulties and shortcomings which are apparent in almost every branch of industry. This compares strangely with the statements of foreign delegations to Central Asia which, as they appear in the local press, express unqualified admiration for Soviet achievement in output and in the organisation of labour. Pravda Vostoka of 28th August carried the report of a VOKS press conference with members of an Algerian delegation which recently visited Uzbekistan and Tadjikistan. The leader of the delegation spoke in glowing terms of the technical superiority of Soviet industries. In his opinion, the Soviet Union was assured of a high level of labour productivity in the future, and of a continuous improvement in the quality of production. He also asserted that labour had every opportunity of raising its cultural level and professional qualifications. The impressions recently recorded by a delegation to Uzbekistan of Indian women were of the same character. Neither of these delegations appeared to take any cognisance of the stream of criticisms and complaints which were filling the local press at the very time of their visits.

In spite of the prominence given to difficulties and setbacks, however, the general impression gained from an objective study of Soviet publications is that material progress in the field of Central Asian industry has been considerable. In some instances, the employment of labour in industry may even exceed that in agriculture. For example, whereas in Turkmenistan 68% of the republic's economy was taken up in agricultural pursuits in 1927, by 1941 this percentage had dropped to 27,7% being absorbed by industry, a tendency chiefly due to the rapid development of the oil-fields. The progress of industrialization in Kazakhstan has been particularly remarkable, and it is noteworthy that the directives given at the All-Union Party Conference of last year for the 1951-1955 Five Year Plan indicated that the tempo of the industrial development of Kazakhstan was to exceed that of any other part of the Union. For instance, the increase in coal production for the whole Union was set at 43%, but that for Kazakhstan at 59%, and the Kazakh chemical industries were to increase their output of phosphate fertilizers 19-20 times, and of sulphuric acid 9-10 times. Generally speaking, the drive for increased industrial output is widespread throughout the Central Asian republics. Whatever the plans for the increase in agricultural output, there are no indications in the Central Press that this is to be done at the expense of industry in general. It is, of course, possible that the almost complete absence of any news during the past 6 months of progress on the Grand Turkmen Canal may indicate a deliberate slackening of effort in grandiose projects of this kind, but it may also be due to some natural or technical phenomenon quite unconnected with policy.

In the absence of exact or comprehensive statistics, it is difficult to arrive at an accurate estimate of increases in output, or of the exact significance of percentage failures to reach the prescribed plan. In Uzbekistan, the coal Trust of Sredazugol was reported to have raised its production by 10% in the first 4 months of the year and to have lowered costs by 5 roubles 87 kopeks per ton, while at the Angren coalfields an economy of 6.15 roubles had been effected. As reported elsewhere in this issue, important claims of increased output owing to the speeding up of mechanisation are made for the Karaganda coalfields of Kazakhstan. Many other reports of increased production could be quoted, but it is invariably difficult to relate them to the productivity of labour, partly because of the vagueness of the percentage system of statistics, and partly because of the admittedly prevalent evil of "Shturmovshchina" or rush operations, details of which will be described later.

An example of the vagueness of some press reports can be found in the following. During 1952, the total output of Tashkent's industries reached "103%", presumably an increase of 3% on the previous year. Labour productivity was said to have risen by 5.4% during the course of the year. At the same time, many of the plants failed to carry out the output quotas and suffered losses amounting to tens of millions of roubles owing to their products being rejected or downgraded. It has recently been reported that in the first 4 months of 1953, 75 of Tashkent's industrial plants had not fulfilled their plans and had defaulted in their total deliveries to the extent of 35 million roubles. It is not known what proportion this represents of Tashkent's industries, but the figure does include such important factories as Uzbekselmash (Uzbekistan Agricultural Machinery), Tashselmash (Tashkent Agricultural Machinery), Tashtekstilmash (Tashkent Textile Machinery) and the Kaganovich Wagon Repair Workshops. Other admissions in the Uzbekistan press are failures in the proper running of the Voroshilov Tashselmash and Sredazkhimmash (Central Asian Chemical Products) Trusts, both of which sustained losses from rejects amounting to several hundred thousand roubles in five months. There were also references to a drop in production indexes in Begovat where the asbestos cement pipe works had failed to fulfil its plan, and the cement works were accused of a falling off in the quality of production and of unwarranted excesses in the use of fuel.

Complaints of low productivity throughout the five republics are very numerous, and some of them are more specific than the foregoing. It was reported from Tajikistan that 80% of 47 artels affiliated to the Tajikistan Promsoviet (Industrial Council) had defaulted in carrying out their production norms for the first half of the year. This was attributed to the apathy of the administration

which had not even attempted to carry out any technical training in 1953. At the Stalinabad clothing factory a quarter of the workers were said to have been unable to carry out their quotas, although these had been deliberately lowered in order to enable the management to claim high achievement. Enormous losses had been incurred through the need of remaking at least 10% of the articles produced. Many reports of defective quality in industrial output came from Kirgizia. A Union control commission had condemned a large part of the output of the Frunze Repair Workshops, and in November and December of 1952, half of the manpower employed in these workshops had had to be assigned to the correction of the faults detected. All this was said to be due to the misplaced and uncoordinated efforts of the management to achieve great quantity rather than good quality. Even accountants and dispatch clerks had been drafted into the workshops and given mechanical jobs for which they had neither the training nor the competence.

The low level of productivity is attributed to the lack of political as much as of technical training. Nevertheless, it seems to be generally considered that the inculcation of the right ideas and spirit is much easier in industry than in agriculture. This is because Trade-Union and Party work is better organised and more effective in the industrial areas than in the outlying rural regions.

PROBLEMS OF INDUSTRIAL MANAGEMENT AND LABOUR

From the Soviet point of view, the main problem confronting the selection and proper use of industrial manpower is the admitted rarity of the right combination of technical ability with political and ideological orthodoxy. The need for such a combination is chiefly felt in the higher ranks, but since it is a maxim of Marxism that no class can take and hold power unless it can promote from its own ranks men to organize and control its economy, such a combination has to be cultivated throughout the whole of society. All the shortcomings inseperable from the rapid superimposition of an industrial on a traditionally agricultural economy such as maladministration, technical inefficiency and corruption, are considered to be related in some way or another to this problem.

In examining the numerous cases of malpractice and inefficiency cited by the Soviet Central Asian press, considerable circumspection is necessary. Startling and significant though many of these exposures seem to be, there is no reason to doubt their accuracy. At the same time, it must be realised that since all enterprises in the Soviet Union are official ones, they are all exposed to the fire of criticism and comment which elsewhere is reserved for the comparatively few enterprises under government control. In the Soviet Union, such

criticism is regarded as a recognised means of inspiration, stimulation and corrective.

Inefficiency and Indiscipline

Although Soviet criticism is in general more concerned with immediate effects than with basic causes, it is sometimes admitted that inefficiency is the result of the development of industry at a pace too rapid for the training facilities provided. This factor was specifically mentioned in connection with recent exposures of inefficiency in Kirgizia. A certain section of the Kapitalnaya Mine has defaulted in coal delivery because of sheer fraud resulting from the low standard of discipline. Coal brought to the stop of the shaft was invariably mixed with foreign matter. But no attempt was made to remedy this defect at surface level, for the miners were paid on the basis of waggon-loads, and they were well aware that the management itself was only interested in carrying out quantity quotas in order to earn their premia for overproduction. Another instance of what was described as "gross carelessness and disregard of state interests" was recently reported from the Pishpek section of the Turksib railway. Freight loadings were hardly ever checked and locomotives kept unnecessarily under steam. This meant that locomotive brigades would earn their full or even extra pay while fuel was being wasted. The management of the section was apparently mainly interested in achieving mileage quotas, and locomotives were often moved about between stations without any perceptible loads, simply in order to swell mileage returns.

Instability of Labour

A serious problem of Central Asian industry is what is known as the podvizhnost of labour. This means the constant shift of labour for various reasons from one job and from one place to another. It is a common feature of the light industries on construction sites and in trading concerns, but it is less prominent in the heavy industries such as coal-mining. This evil is attributed to a number of causes perhaps the chief of which is the existence of a large force of casual specialized labour which drifts from one construction site and from one MTS to another sometimes in search of better amenities and accommodation, and sometimes merely actuated by a desire for constant change. Another reason for this fluidity is the constant dismissal of technical staff which then moves on to other places in search of employment. At the 10th Isfara Party Conference it was reported that in the first seven months of 1953, no less than ten mining engineers had been replaced in Mine No. 8 alone, while during the same period the Uzbekugol Trust had dismissed four bookkeepers and the Isfara railway station had changed its stationmaster four times. It was recorded that replacements in the Isfara rayon amounted to

27% of the whole establishment. It is now generally realized that this impermanence of technical staff not only militates against day to day efficiency, but upsets the entire programme of training. The tendency for mechanical specialists to change their occupation, for tractor drivers and engineers to become, for instance, teachers in technical schools, constantly creates vacancies which it is impossible to fulfil from the training establishments.

Fears have been expressed that unless a stop can be put to this constant movement a whole army, almost a class, of wandering specialists may grow up which will have a highly detrimental effect on industry throughout Central Asia.

Where absolute permanency is found it is often caused by another objectionable feature, namely, the entrenchment of small family groups in certain branches of industry. This is particularly noticeable in the Uzbekistan Textile Trades' Union, where not less than forty inter-related people were working in responsible posts, and were thus able to achieve "machinations and combinations" highly detrimental to the interests of this state. At No. 5 Distillery in Kokand the Director and Secretary were surrounded by a narrow family circle of relatives which enable them to stamp out all criticism in the lower ranks.

Shortages of Skilled Personnel

At present there appears to be no appreciable numerical shortage of unskilled or semi-skilled industrial labour. Shortages of properly qualified and trained personnel of the higher grades are widespread but not universal. In Tadzhikistan, for instance, such shortages of foremen and higher technical employees as are admitted are usually attributed to faulty selection and to failure to promote capable young men to responsible jobs held by old-timers who were either lazy or imcompetent. It is even maintained that in Tadzhikistan there is a surplus of qualified manpower in the light and food industries which has resulted in what is called "technical unemployment". This, it is said, could only be met by a redistribution of manpower by the central authority.

In the Tashkent oblast of Uzbekistan, which contains the largest agricultural machinery plants in Central Asia, the shortage of qualified specialist personnel is seriously affecting output and constructional expansion. This shortage is attributed entirely to lack of training facilities, but it is said that these large plants were short of the necessary funds for the provision of such facilities.

Mention has been made in the press of the new policy of encouraging the private ownership of land and cattle. No reference has so far been made to the extent which this might effect the country-to-town drift which has been apparent during recent years, but the prospects of more profitable employment in the country might well reverse this trend. There is much leeway to be made up in agriculture, and particularly in the breeding of livestock, the private ownership of which has dropped by nearly two thirds during the past twelve years. Such a reversal might have its effect on the provision of industrial labour. There are already cases of difficulties in obtaining kolkhoz labour, for instance for the construction of the smaller hydro-electric power stations, particularly when sowing and harvesting operations are in progress.

Employment of Women

The question of the employment of women in industry is one which gains frequent mention in the Central Asian press. Far more women are still employed in agriculture than in industry, and in general they provide unskilled rather than skilled labour. But the part which they play in the latter is not negligible; for instance, in the Kanibadam raion of Tadzhikistan, 140 girls are being trained in the local technical institutes, and over 2,000 are already employed in regional and city industries, as against 4,772 working in the fields. In the Stalin raion of Ashkhabad, 46% of the working population consists of women working in industry, transport and communications, and 1,300 women have gained distinctions in socialist competition. In the first half of the year 117 women had passed their qualification tests, and had been accepted into industry. Women's councils at the Krasnyi Metallurgical Plant, the Ashkhabad Railway Station, and in the Signals and Communications Departments of the railway have combined into a formidable female "aktiv" intent on safeguarding women's professional rights and on raising State and labour discipline. Elsewhere in Turkmenistan, however, women workers are far less well organised. In the construction work proceeding on the Glass Factory, which employs about 50% of women, the barrack and dormitory accommodation is described as deplorable. At the Ashkhabad brickworks known as "No. 10", the women's barracks has no lighting, and not even the most essential furniture. Thereis no radio and no other amenities for recreation. It has been reported from Kirgizia that 42% of all the workers in transport, industry and communications are women, the percentage of women of the total workers employed in agriculture being 56.5.

"Shturmovshchina"

Mention has already been made of "shturmovshchina", a practice which is subjected to violent condemnation in the press. It

appears to be a by-product of the system of norms. Both management and labour are conscious of the necessity of fulfilling their monthly quotas, but the latter prefer to do this by a process of taking it easy during the first decade of the month, slightly increasing their tempo during the second decade, and applying "shturmovshchina", or rush tactics, during the last decade. For example, in the first decade of December, 1952, the Tashkent Excavator Works produced less than 10% of its monthly plan, in the second 20%, and in the last decade 70%. Similar instances are reported in the Kagan oil extraction plant and from the silk, shoe, lime, timber, knitted underwear and flour milling industries of Tajikistan. Quite apart from the harm done to machinery by its being made to run at a forced pace during a third of the month, it was estimated that a more rhythmical method of work could bring up production by 20 to 30% with a corresponding improvement in quality.

Attitude towards Mechanization

Judging from the complaints and criticisms which regularly appear in the press, the misuse of machinery and mechanical aids, and even the failure to use them in preference to manual labour, are no less common in industry than it is in agriculture (see the article on Manpower in Agriculture in No. 2 of Central Asian Review). Stoppages due to mechanical breakdowns in the Kumdagneft (Kumdag oilfields) amounted in some months to 20% of the planned working hours. During a period of 6 months, excavators administered by the Turkmenistan Ministry of Housing had worked only 4,043 hours out of a total of nearly 35,000 planned working hours, and scrapers and bulldozers of the same Ministry had worked only one fifth of the time that they were supposed to be in use. In the first half of 1953 the excavators of Uzbekpromstroi (Uzbekistan Industrial Building Trust) had worked only 2,198 hours out of a planned total of nearly 11,000 hours, while the bulldozers had only worked 600 hours out of a planned total of over 7,000 hours. In some of the complaints of failure to utilize "latent reserves of machinery" with consequent lowering of output, it is not always easy to say whether the failure is due to bad management, inefficient training, or prejudice against the use of machinery. One complaint brought by the newspaper Kommunist Tajikistana against the management and Party "Aktiv" of the Traktorodetal (Tractor Spare Parts) Works of Leninabad, that proper use was not being made of the reserves of machinery and manpower, produced a retort from the manager at a public meeting (reported in the same newspaper) that the newspaper itself did not know or understand the actual facts of the situation. In other instances, however, the stubborn prejudice against the use of machinery is brought to light. At the Frunze Building Trust enough machinery had been installed to replace the efforts of 6,000 manual workers; but much of this machinery stands idle while the work of excavation and handling of bricks at the

building site is done by hand. At the Dzhambai Jute and Kenaf mills, the management was genuinely anxious to execute its annual plan, but it had decided that it could best do this by increasing the number of manual workers rather than by using mechanical devices. In fact, however, the production target had not been reached. There have also been reports that a sceptical attitude towards mechanization still prevails at the Tajikistan Coal Trust, where the productivity of mechanical coal-cutters stands at the low rate of 32.6%, and of coal-loaders at 70%.

(To be continued)

COTTON-GINNING IN CENTRAL ASIA

BACKGROUND

The demand for cotton in the Soviet Union is on a very large scale. Production in 1952, according to a recent speech by Malenkov, amounted to 3,770,000 tons of raw cotton, which was 1.7 times the pre-war figure of 1940; and the target for 1953 was four million tons. Nearly all of this cotton is produced in the Central Asian Republics, with Uzbekistan well in the lead. The Uzbek SSR, in fact, provides four times as much as Turkmenia, Tadzikhistan and Kirgizia together.

Cotton has an obvious importance not only in relation of agriculture to industry (and therefore of the dekhan peasants to the urban proletariat), but also in that of the Republics of Central Asia to the supreme authority in Moscow. It is not misleading to describe cotton as a characteristically "colonial" crop, where the major textile industry is situated in a "mother-country" having power to control the extent of cultivation in the outlying territory. Thus the function of the cotton-growing areas in Central Asia in the whole Soviet economy has a bearing on the degree of dependence of the Republics upon the Soviet State.

We are concerned in this article not with these broad issues but with information recently obtained from the Central Asian Press on present conditions, particularly in ginning: the preliminary industrial process through which the raw material passes before being forwarded to the spinning and manufacturing plants which are largely in the Central Industrial Area of the Union, as much as a thousand miles from the cotton-fields. This information from the Press points to defects at the ginning stage of the cotton industry which may be attributed to several causes. Whatever these are, they can only be appreciated in relation to the industry as a whole; and it is therefore important to understand the part played by cotton in the Central Asian economy, its dependence upon transport to the central industrial area, its relation to local development and something of the history of ginning in the cotton-growing region.

DEVELOPMENT OF GINNING

Irrigated farming is by far the most important agricultural activity in Central Asia, and cotton is the main irrigated crop, being well suited to the soil and the warm, sunny climate. The chief cotton-growing districts are the Fergana Valley, the oases of Tashkent, Samarkand and Bukhara, and the Vakhsh Valley. Though there are in fact mills at Tashkent, Stalinabad, Fergana and elsewhere, the characteristic local factories are the ginning-plants. Seeds are sent

to oil-extracting presses, and the husks are used for fodder.

Cotton-seed was also the first fuel in the early stages of mechanizing the process of ginning, which was manual until the importation of American gins into Tashkent in 1881. By 1911 70 per cent of the ginneries, largely powered by the internal combustion engine, had become concentrated in Fergana. Apart from the tendency to centre the process in the areas of intense cultivation, the location of ginneries was also affected by the development of the railway-system, and the availability of manpower drawn seasonally from the larger towns. The seasonal character of the operation was sometimes taken to extremes in pre-Revolution times by the multiplication of ginning-plants to meet the requirements of the dealers in Moscow to whom speedy disposal of the crop was of the first importance in face of American competition. As a result of this multiplication, in three oblasts the ginneries in 1913-14 were working for eleven days only in the year.

A further result of dependence upon the financial and industrial interests of Moscow was that ginning in the cotton-belt became detached from the cultivator and fell into the hands of numerous factors and agents of the Central Russian mills. This was in contrast to the contemporary development in the USA, where ginning was developed rather as a final process in the treatment of cotton by the planter, rendering it easier to sell and transport, than as a separate industry. As time went on, however, more and more of the ginneries which rapidly increased in Central Asia were in native hands. Their history is a complex story in which the pace of development of cultivation, processing and conveyance have seldom been effectively and economically synchronised.

DEFICIENCIES IN TADZHIKISTAN

A revealing light has lately been directed towards the deficient operations of the ginning-plants in Tadzhikistan and in the Central Asian cotton-areas generally. Statistics of production-plans fulfilled in 1951 and 1952 do not tell the story, for high averages can be maintained by the efforts of a few well run and well equipped plants while inefficiency spreads dangerously elsewhere. Wherever the root of the trouble may be held to lie, it has been impossible to overlook the symptoms. At the spinning and textile end of the industry in Central Russia the bales have been arriving in a state that called for complaint; and the charges, on investigation at the producing end, have been substantiated.

CRITICISMS FROM IVANOVO

Ivanovo, the "Soviet Manchester", lies north-east of Moscow, and together with the mill-towns clustered about it makes the Ivanovo Oblast the leading textile-producing region of the USSR - second to the Moscow Oblast in total production, it is true, but with a local economy proportionately far more dependent on cotton. Complaints from such a quarter carry weight, and it was from Ivanovo that there came last April a stream of criticisms directed mainly against the Proletarsk ginning-plant on the Fergana railway-loop in Tadzhikistan, but bringing other centres into discussion and reflecting upon the Central Asian ginning-industry as a whole.

With the exception of the Stalinabad factory, practically all ginneries were accused of sending consignments of cotton which were not only below the required and established standards but wrongly invoiced and described. There were increasing instances of Proletarsk supplying cotton shorter than the minimum length of 30-31 millimetres, although the mills of the Ivanovo Oblast were noted - it was pointed out - for a yarn of fine quality using a staple of 31-33 millimetres which could and should be provided by the Tadzhik cultivators.

The widespread practice of "up-grading" cotton, it was further complained, meant that deliveries were rarely up to expectation, and wrong indications of the grade often had serious consequences. For example, lots supplied to the Balashov and Lezhnev mills proved on opening to be of lower quality than that invoiced and the readjustment of machinery to deal with this lower grade caused a delay in processing. In another lot 13.3% of dirt and impurities were found, as against a maximum of 11% guaranteed by the packing-list. Not only the Proletarsk ginning-plant, but those of Kurgan Tyube and Regar as well were accused of increasing infractions of this nature, and fines for defective deliveries in 1952 reached a total of 787,000 roubles.

PROLETARSK ADMISSIONS

These complaints were attended to by the Party organisations and trade unions, not of Proletarsk alone, but of the whole Leninabad Oblast, the north-western "peninsula" of Tadzhikistan that wedges its way into Uzbekistan and is one of the most important economic areas of Central Asia. In May and again in July candid admissions were published. The Proletarsk cotton-ginneries Kollektiv deplored the fact that their reputation and that of the entire plant had been

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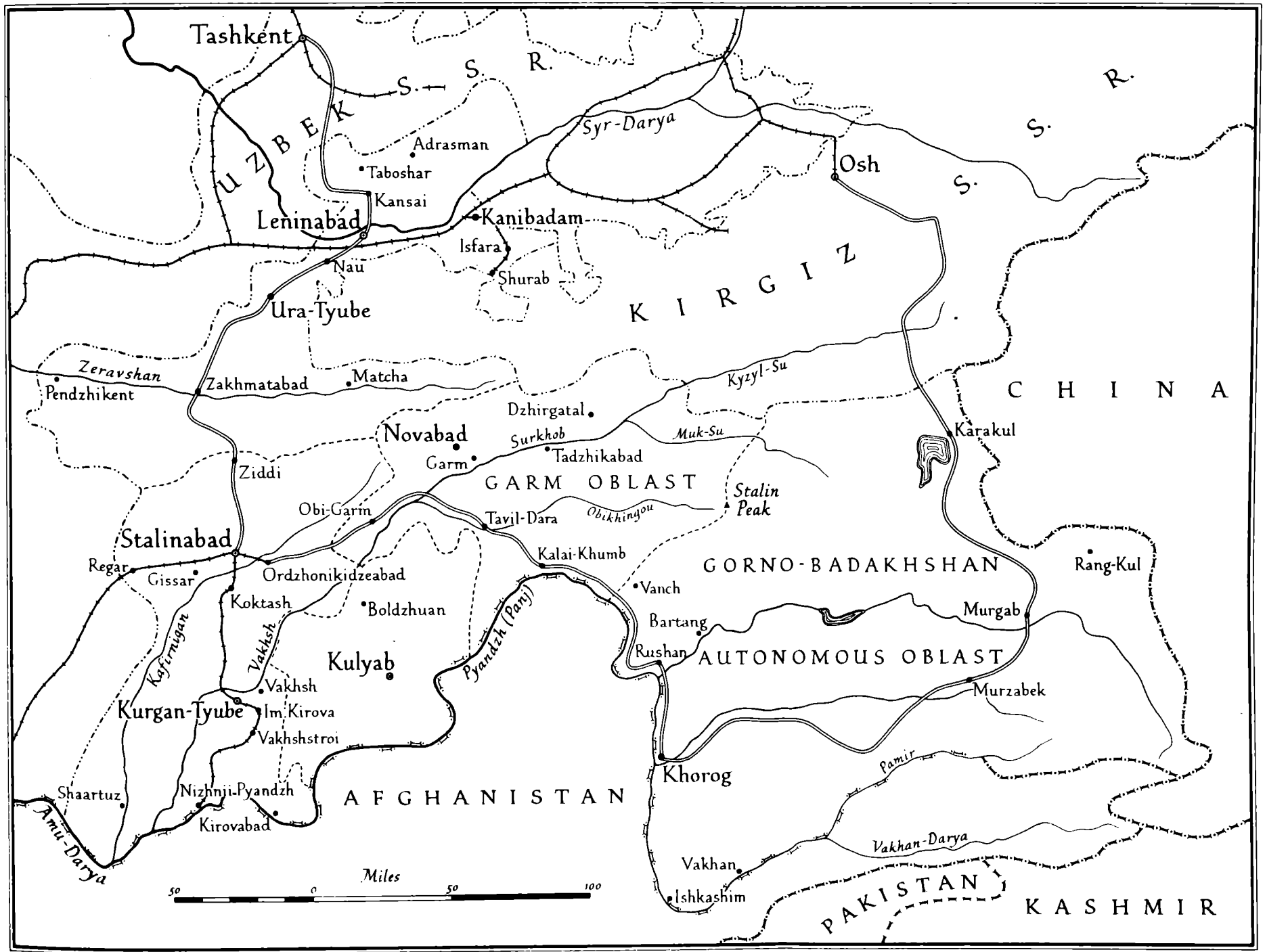

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sullied, and urgent measures were announced for putting things right. There was to be much stricter supervision to exclude contamination above the allowed maximum during the treatment and packing of the cotton, and the laboratory staff were enjoined to be more vigilant and more scrupulous in following established methods of analysis and test before consignments were forwarded.

The causes of the shortcomings uncovered by the investigations by the oblast committees were in themselves revealing. The staff at the ginning-plant were charged with irresponsibility and with permitting breaches of the so-called "technological rules". There had been unexplained delays in the cleaning and overhaul of machines and equipment. Regulations governing the running of factories and mills and the maintenance of machinery had been deplorably neglected. The charges of improper grading, excessive impurities and abnormal humidity in the cotton consignments were confirmed, and attributed to slack supervision by the technical staff. It was definitely established that insufficient measures had been taken to clean and dry cotton of the lower grades.

Moreover there had been collusion, not to say corruption, at the collecting centres. Agents of the ginnery, when taking delivery of cotton from the kolkhozes, were in the habit of making concessions to the farmers for a consideration. By such arrangements cotton of excessive humidity, for example, was accepted and falsely "up-graded". Reporters had no doubt that mutual concessions, leading to mutual concealment of defects, had been the order of the day.

CONDITIONS AT REGAR

Regar, the ginning-centre some fifty miles west of the Tadzhik capital Stalinabad, was promoted to the status of a city in 1953, and the Tadzhik press evidently regarded the shortcomings revealed at the ginnery as a reflection on the new dignity of the place. The installation of new processing equipment was reported in August, with extra Diesel-power. This and other improvements were designed to meet the demands of the spinning-mills for prompter deliveries, cleaner cotton, and higher grades of quality.

This followed a series of unseemly revelations. Bales of cotton had been despatched from Regar contaminated not only by dead leaves, seeds and fragments of hull but also by entirely foreign matter such as rope-ends, wiring and bits of iron. Output plans had been by no means fulfilled. There had been many stoppages of work on account of mechanical breakdowns, and in October 1952 the plant worked only for twelve days and then not at full capacity.

Nor did matters improve in 1953. Breakdowns and under-running continued, and the reduction of ginning operations led to an accumulation of raw cotton which in its turn overstrained storage capacity in the kolkhoz. In February 1953 the Regar plant still had a stock of 5,000 tons of cotton seeds awaiting processing, and the accumulation was being cleared only slowly.

REPORT ON KURGAN-TYUBE

KURGAN-TYUBE, in the Vaksh Valley, is one of the largest cotton-ginning centres of the USSR. The ginning-plant retained throughout the year the Republican Red Banner of Achievement - obviously for quantity rather than quality, since Kurgan-Tyube was indicted like other centres by the Ivanovo spinners. Complaints of contamination instanced one lot sent to the Dzherzinsky mills with $5\frac{1}{2}$ per cent, and another with as much as 10 per cent of foreign matter over and above the permitted maximum. This frequent defect, and the carelessness responsible for it, were cited by the Press as the worst feature of deliveries from Tadzhikistan.

Though the industries of Kurgan-Tyube were in general praised for increased output and efficiency, reports left the impression that the ginneries of the Vaksh and Gissar Valleys lacked even now the capacity to deal in an orderly and timely manner with the processing of all the raw cotton produced in this fertile district, and that stocks awaiting treatment could not be properly protected from deterioration and damage.

PROBLEMS OF THE TADZHIK GINNING-INDUSTRY

MODERNISATION

Extension of plant and replacement of obsolete or defective equipment, together with "rationalisation" of industrial processes, were seen by the investigators as the most practical means of curing deficiencies and increasing output. In August the Tadzhik papers openly urged the need for modernisation.

At the same time the Press gave publicity to measures already taken to improve plant at the ginneries. Two million roubles had been assigned for reconstruction, and with new or reconditioned equipment an increase of 20 per cent was expected in production capacity. Much equipment, as has been mentioned, was reaching the Regar plant, where antiquated wooden gins were to be replaced, modern conveyance and handling devices installed, and better power provided. At Kurgan-Tyube a powerful press constructed at Novosibirsk had been

mounted, and also three new diesel-engines.

At the Stalinabad plant all brushing equipment for separating linters had been replaced by more modern machinery bearing the XLM Trademark. At Leninabad repairs had been completed, an additional power-transformer had been installed and the ginnery was now fully electrified. Railway-sidings to the plant had been relaid, and the freight-checking system was improved by a new 100-ton scale. At Proletarsk, Parkhar and Ainin also, reconstruction work had been put in hand.

Modernisation and mechanical improvement, however, did not always produce results in higher and better output. Of the Shaartuz ginnery, south-west of Kurgan-Tyube and near the Afghan frontier, the Press had strong criticisms. It had been constructed only a year before, it had first-class machinery and employed qualified technicians and workmen. Nevertheless it was reported in August that the current plan had not been fulfilled, and deliveries of cotton from the ginnery were short by several hundred tons. In July it worked for only half the month but even so produced only low-grade cotton.

DIRECTION AND MANPOWER

For the shortcomings at the Shaartuz plant inadequate Party guidance was offered as a main reason. Not only was the ginnery director criticised for an indifferent attitude to proposals for rationalisation put forward by foremen and workers, but there had been attempts to smother criticism; and indeed the whole Party Kollektiv had failed to support initiative in the labour ranks. The Party Committee had not so much as discussed the management's faulty running of the factory. The chief engineer had insufficient technical knowledge and there was no Party control. At the root of the trouble, it was said, were "brakodeli," men who knew no better but were subject to no check.

A further consequence of negligence by the Party organs was a decline in living-standards and conditions of labour, signals from below having been disregarded; and this in turn made labour fluid and affected the supply of special cadres. Only one-third of the employees at the Shaartuz plant were Trade Union members.

The evils of slack direction were seen at every stage of the ginnery's operations. Cotton was not collected in time from the producers. Roads were neglected and bridges in a dangerous state. Repairs to carts, trucks, sheds and storage-surfaces were belated, and the scales used at the collecting centres had not been checked at the central repair workshops.

Apart from the state of affairs at Shaartuz, labour problems were blamed throughout the ginning-industry for the poor quality of the cotton consigned to the mills. Forcing up cotton cultivation produced a demand not only for more and better processing machinery but also for manpower and services. And this latter demand, under conditions of "stakhanovite utilisation", was increasingly difficult to meet.

ROLE OF THE TRADE UNIONS

The part to be played by Trade Unions in the training and discipline of labour came in for a good deal of comment in the examination of the condition and problems of the ginning-industry. Regional Trade Union committees in Tadzhikistan had been cut from 25 to 17, a step expected to promote efficiency; and there was clearly a Party demand for greater Trade Union activity.

In principle wide responsibilities were expected of the Trade Unions, for improving working and living conditions, for professional training of labour and for cultural uplift. It was explicitly stressed, however, that all such tasks were subject to the direct guidance and patronage of the Party. Inefficiency and low production standards were attributed to the fact that Party officials had detached themselves from the Unions. They had failed to give proper guidance or to respond in a practical way to the initiative of works committees, whether in the factory or on the sovkhoz estate.

The failure of Trade Unions and Party cells to enforce labour discipline had its effects even in the Stalinabad ginning-plant, which escaped the heaviest criticisms. Breaches of discipline there in 1952 had led to fluctuations in the supply of labour, which the Trade Union "aktiv" working as a subordinate organisation to the Party, was now expected to remedy. Here and elsewhere in the Tadzhik Republic - and not in the ginneries alone - there was a demand for achievement in the training of labour and technicians, and Trade Union work was to be regularly discussed by the Party at city, raion and oblast meetings.

COTTON-GINNING IN OTHER REPUBLICS

Wherever cotton is grown ginning has the same broad industrial, economic and social consequences to meet. The expansion of cotton-cultivation in the Republics of Central Asia has involved further development of irrigation, more ginning-plants with improved mechanisation, extended communications; all of which must be expected to have their impact upon the dekhan economy and upon the outlook of people in a changing social setting, with advancing material conditions working

possibly against the stark fact of dependence upon the organs of authority and of industry in Central Russia. The reflection of the complaints made in respect of the Tadzhik industry, at all events, is seen in the other ginning-centres of the cotton-area, in Turkmenistan, Uzbekistan and Kirgizia; and similar measures have been called for to meet similar defects.

TURKMENISTAN

Two Turkmen ginning-plants that have been particularly mentioned in reports - Tashauz and Chardzhou - both on the line of the Amu Darya river close to the Uzbek border. In the expansion of plant Tashauz had mounted a 600 h.p. Diesel unit for a new plant expected to be finished by the end of 1953, and the No.1 ginnery was getting a new building to house improved equipment; while at Chardzhou the No.2 ginnery was due for considerable repair and reconstruction. Kerki, further south-east along the Amu Darya, was also being provided with new Diesel-power, and labour-saving devices installed at Mary, in the Murgab oasis, included automatic scales.

An active policy of re-equipment, however, was not by itself sufficient to remove difficulties. For example, a new Diesel-engine installed in April at No.1 plant at Chardzhou was soon out of action, and four hundred hours of work were lost before it was put right. The management at this ginnery was accused of ignoring all advice from the labour-ranks, and even the technical boards of specialists convened from time to time found that they had been called not for consultation but to receive orders. Failures and breakdowns were frequent at this plant, and the bureaucratic manner of running socialist competition drives has been made the butt of the Press.

Energetic intentions were revealed in May by the delegates of the Turkmen ginning-plants, who resolved to complete their year's plan by December 25, to exceed output by 20 million roubles, to cut processing costs by three per cent, to increase labour productivity by five per cent and to discharge 150 workers who would become redundant.

UZBEKISTAN

In the key Republic Of Uzbekistan the defect to which all criticisms point is the failure of the ginning-industry to absorb economically and efficiently the increased output of an active cotton-policy. There was an enthusiastic announcement on August 21 that the gross output of the Uzbek ginning-plants had increased thirteen times since the season 1924-5. But on the same day the present Minister of Finance disclosed that 1952 had been a year of rising costs as well as rising output, and that the increase in the cost of cotton to the consumer was disproportionate. Those directly concerned in the running of the ginning-industry were charged with dismal failure to contain the costs of processing. More interested in production-targets than in costing, they had allowed wasteful methods of dealing

with the abundant raw material to burden the industry, and the whole economy of Uzbekistan, with heavy losses. In the western and more backward areas, production costs had risen by 25 million roubles in the Kara-Kalpak ASSR (now attached to Uzbekistan) and by 22 million in the Khorezm oasis. But the Uzbeks themselves had a 40 million rise to account for at the plants of the Tashkent Oblast in the best cotton-district in the east. Nor do the overall figures of gross output depict accurately the state of an industry in which 40 per cent of the ginneries had in fact failed to carry out their 1952 production plans, a failure expressed by the formidable figure of 156 million roubles.

The inability to work within normal budgets was attributed to a rise in primary production costs, to inattention to strict grading when accepting cotton from kolkhoz or sovkhoz estates, to increased contamination, and to numerous other factors. The total increase in costs over and above estimates was given as more than 185 million roubles. At Bukhara an additional 735 tons of cotton could have been processed, and at Gizhduvan an additional 950 tons, if machinery had been fully utilised and the plant had been kept working at capacity. The Bukhara plants were further severely criticised for wasteful consumption of packing materials and the wear and tear of packing-fabrics which should have been used six times over but were only used once in bringing cotton to the plant. Packing at the collecting centres, which was mostly a manual process in the Bukhara area, also accounted for waste. The need for mechanized packing, not only at Bukhara but elsewhere, was emphasized by the recent tour of research associates of the Uzbek Academy of Sciences, who visited 59 cotton-collecting centres of the Tashkent, Fergana, Andijan and Namangan Oblasts. Only 22 of these were found to be equipped for the mechanical sacking of raw cotton, and the number of belt-conveyors was half what was required.

Connected with faulty packing was the further item of misuse of transport, and overpayment to the railways reached considerable sums, augmenting both the price to the consumer and the loss to the ginning-industry. In 1952 the Bukhara plant had by August 1 already incurred losses amounting to 2,760,000 roubles.

In Kara-Kalpakia the record was if anything more dismal. Four plants out of six were on an average 13 per cent below plan in their 1952 output, and results in the first half of 1953 were no better. The losses noticed in this area were largely due to the widespread fault of over-grading and wrongly marking the ginned cotton dispatched to the mills, and carelessly accepting raw cotton from the fields. In the first 5 months of this year the plant at Chimbai had produced 630 tons of cotton below standard, that at Kungrad 353 tons and that at Khodzheili 500 tons. The fines which had eventually to be paid to the Russian spinners on this account and the waste of packing materials added greatly to working costs.

As elsewhere, the breakdown of labour discipline through managerial, Trade Union and Party complacency was blamed for much of the inefficiency in the Kara-Kalpak ASSR, with special mention of the inept organisation of socialist competitions. A drive was started to remedy this state of affairs, to improve technical training and political indoctrination and to use the principle of socialist competition effectively. The introduction of new equipment was also intended to put fresh life into the comparatively young ginning-industry of Kara-Kalpakia, and favourable results were being quoted.

KIRGIZIA

Better reports came from Kirgizia, smallest of the cotton-areas of the Central Asian Republics and not to be compared with the others in the size of its ginning-industry. The scale is suggested by the modest figures of expected economies to be secured at one plant by rationalisation; fifty tons of raw cotton, 12 tons of fuel, 4,500 metres of packing-material and 4 tons of wire. Another ginnery reported the decision of its Kollektiv to complete the processing of the previous year's cotton 15 days ahead of schedule and the "stakhanovite" spirit of its labour force in exceeding daily norms of output.

Here too, however, there were numerous breakdowns attributed to obsolete equipment, and the Kirgiz ginning-industry was backward in its deliveries to the State.

DISTRIBUTION OF PLANTS

The rapid expansion of cotton cultivation in Central Asia, now being further extended by advances in irrigation, has evidently raised problems which still await their solution. One of them, frequently mentioned in reports, is that of the distribution of ginning-centres, which is in many ways uneconomic. The ideal arrangement is to have all the processing and baling of cotton carried out as close as possible to the areas of cultivation, which in turn requires improved road and rail communication. As new lands, often in formerly desert areas, are brought under cotton, this becomes an enormous problem, and one which is changing all the time. Further mechanisation of handling, baling and transporting the cotton, both raw and processed, is constantly called for, and each introduction of new equipment is acclaimed for the promise it holds out.

The impression remains, however, that all such improvements, however ambitious, are inclined to be piecemeal in their execution. The demand for more and better cotton for the mills fifteen hundred miles away goes on. There is no pause for consolidation in which facilities for transport and processing can catch up with the expansion of this single crop on which the Central Asian economy somewhat dangerously (from a Central Asian viewpoint) depends. And it may well be that in the meantime underlying problems, both economic and social, remain unsolved. Such is the inference to be drawn from the criticism and examination to which the ginning-industry in the Central Asian Republics is being subjected.

U Z B E K I S T A N

Electric Power in Uzbekistan

Before the Russian Revolution the average consumption of electric power per head of the population in what is now the republic of Uzbekistan was one fourteenth of the corresponding figure for the whole of the Russian Empire. Today the position has been more than reversed: the power consumption in this Central Asian republic is eighteen times as great as that of the Ukraine or Central Russia, reckoned again on the basis of population. The great change was to some extent accelerated during the war when there was a large scale move of Soviet industries to Central Asia, but at no time then or since has anything like the limit of development been in sight. The republic has river and canal resources which are estimated to be capable of developing 40 million kilowatts, but even the present "pyatiletka" and the one that follows it do not aim at using more than a fraction of this huge reserve of power. Academician B.E. Vedeneev has calculated that Uzbekistan has a hydro-electric potential per citizen which is three times that of the Ural or the Volga region. In terms of absolute output the area is fourth among the units of the Soviet Union. Yet in 1913, of Russia's output of 1949 million kilowatt hours, Uzbekistan's contribution was 3.3 million. In that year the total capacity of all the stations of Russian Turkestan was 3,000 kilowatts and the largest power unit was one which Belgian engineers had erected in Tashkent to drive the city's trams.

The development over the past thirty years which has so greatly strengthened the economy of the republic, has gone on even after the last war. Thus in 1947 an increase of 11 per cent over the previous year was recorded. There would appear to be scope for much further use of the waters of the Chirchik, the main source of hydro-electric power of the region. This river is known as the Pskem in its upper reaches after joining the Chatkal, and it has an average flow of 220 cubic metres per second reaching 350 cubic metres in the cotton season and a high level of 490 cubic metres in the month of June. The river flows too fast to be of use for navigation and so its main use must be as an important source of power for the Tashkent-Chirchik-Begovat grid.

The progress of electrification has naturally not been without many problems and the successful solution of these has been a matter of concern to the authorities as well as to the Soviet press and Communist Party officials. Planners have made their mistakes, and perhaps learnt their lessons, in their efforts to electrify not only cities and industry but also the homes and the farms in an area whose economy was but lately of a primitive rural type. They have paid the

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price for overlooking the timetable set by nature and the human factors which have to be taken into account in the working out in practice of what seem to be very good schemes on paper. In the paragraphs that follow an attempt is made at an objective survey of the growth of the system and of the difficulties encountered in the process.

Historical Survey

Although thermal power stations were erected between 1921 and 1926 at Tashkent, Samarkand, Bukhara, Namangan and New Urgench, the first big project carried out under the Lenin Goelro Plan -- the 1920 State Commission for the Electrification of Russia -- was the hydro-electric power station on the Boz-Su Canal. It aroused a great deal of technical interest as the first station of the Chirchik-Boz-Su "Cascade". The first two Stalin Five-Year Plans saw the completion of the Fergana thermal and the Kadyrinskaya and Burdzharskaya hydro plants so that at the opening of the 18th Party Congress it was possible to report that the Tashkent and Fergana industrial regions had reached a high degree of electrification.

By the time the 19th Party Congress met (1952) further increases in the supply of power in the republic were recorded. The year 1940 saw the first of the Chirchik hydro stations in operation at Komsomolskaya and early in the war another station was opened at Tavak. Then came the large scale wartime removal of Russian industries to Central Asia and with it the demand for far more power, and the big developments in the Tashkent oblast. The task was urgent and as mechanical excavators were not very freely available, the manual labour of kolkhoz workers had to be used on a large scale to build new stations along the Boz-Su waterway. This speedy erection helped to get a number of industries going which made a significant contribution to the war effort.

In 1943 the Ak-Tepe, Ak-Kavak and Kibrai stations were completed. The citizens of Tashkent did most of the work on the Salar station in what is described as a voluntary patriotic gesture. In 1946 Ak-Kavak No. 2 was completed, but a more important landmark was the provision of power for industry for the first time from the first section of the big Farkhad scheme, the largest hydro project in Central Asia and the third in the whole Union. This event took place in February 1948 and the Boz-Su - Chirchik waterway system thus assumed great hydro-electric importance. This scheme will be described in further detail, but it is relevant here to refer to the volume of construction work done in the Fergana Valley, where a centralized grid came into being to supply the Fergana and Andijan oblasts and adjacent Kirgiz raions. Thermal stations were erected at Kokand, and hydro-electric

plant at Sharikhansai and along the North Fergana Canal. To speed up work the manual labour of local kolkhoz workers was utilized, and it is claimed that the excavation work along the first 164 kilometres of the Ferghana canal was completed in three weeks by a voluntary labour force of 164,000 local workers during the slack period when the cotton crop did not need their attention. As a result of all these developments, Uzbekistan took fourth place among the republics of the Soviet Union in its output of electric power, the first three being the RSFSR, the Ukraine and Azerbaidzhan.

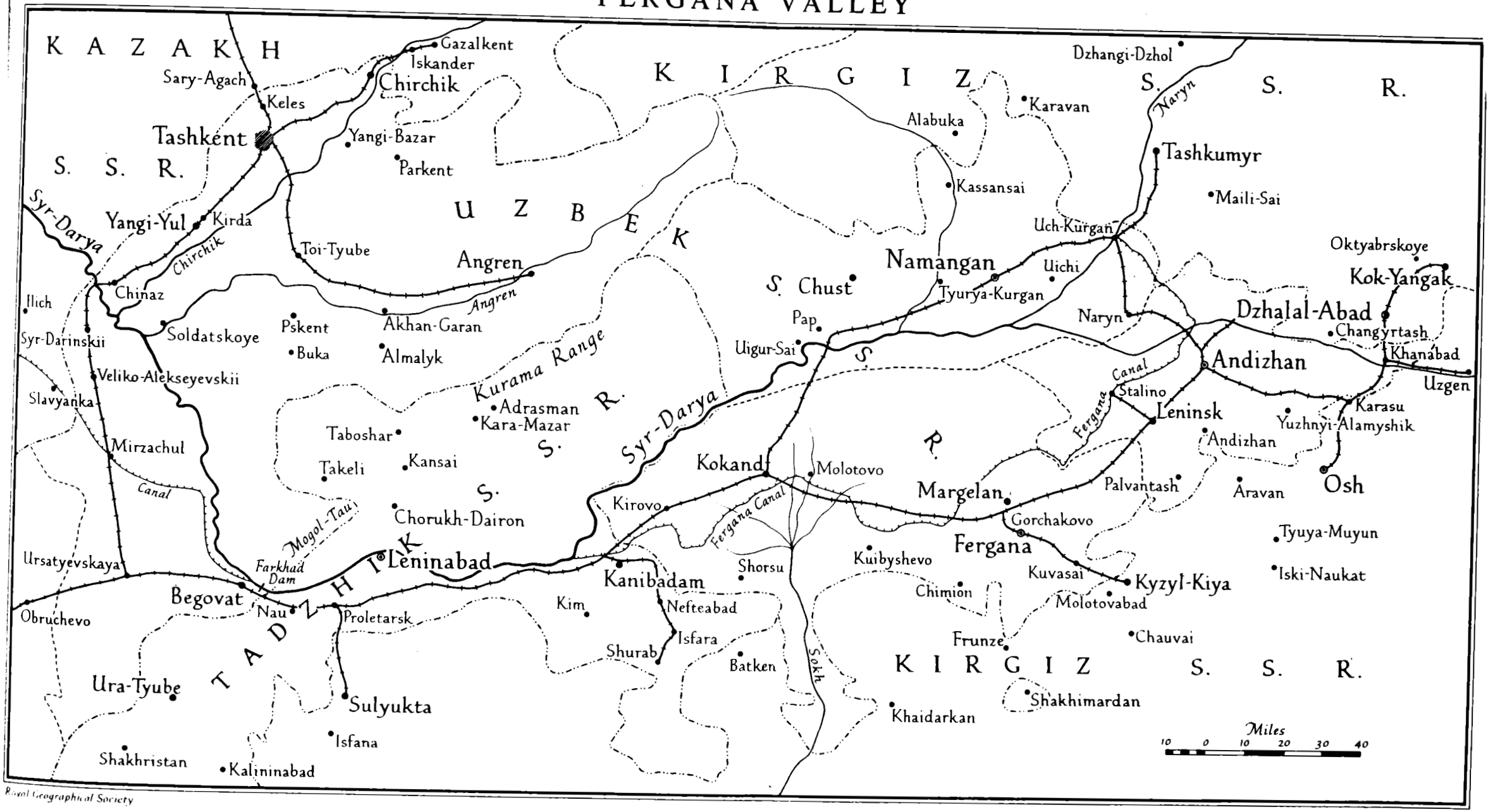
The Farkhad

As already stated the first section of the great Farkhad project was opened on February 15, 1948. It had been built mostly during the war and its construction, largely by the manual effort of kolkhoz labour, involved the removal of 20 million cubic metres of earth, while the river had to be dammed, a 14 kilometre canal built and 280,000 cubic metres of concrete and ferro-concrete were put into the work.

The planners of the Farkhad scheme had visualized a complete transformation of the entire scene over a considerable area. It would provide the necessary foundation for industrializing the Tashkent oblast and for the growth of new cities where, in fact, Chirchik and Begovat have arisen. Moreover the harnessed river waters would irrigate thousands of hectares in the Golodnaya Steppe area. Soil conditions in the basin of the Syr-Darya would be improved as the controlled flow of the Chirchik would tap the subsoil waters of parts of the Syr Darya valley, and lands once seasonally inundated would be reclaimed and rendered fit for cultivation.

As a completed project the Farkhad does not now receive the widespread publicity given to newer schemes of all-Union significance. There were, however, in 1952 a number of press references to new installations for the automatic control of power equipment and of the station's generating plant, which make for increased efficiency. Last June it was reported in the press that the four-month target for output had been reached and that the station's "kollektiv" was embarking on increased mechanization and more automatic control. At the same time it was admitted that due to the fluctuating demand for power and the consequent fluctuating power load, the system was not working as smoothly as was to be desired. It would appear that Uzbekenergo, the republic's central agency for handling power resources, was not making full use of the station's capacity for generating power, and this was being used as an excuse for the monthly output achieved by the "kollektiv" of the station falling below schedule.

FERGANA VALLEY



Royal Geographical Society

The Coming of Age of Chirchik

A landmark in the history of hydro-electric development in the Chirchik region has been the coming of age this year of the town of the same name. The river with its canals has been the first to be tapped for power in this region. It now serves 13 remote control automatic power generators -- a "cascade" of power plants which will in time grow to 20 -- and its waters have helped Chirchik city to grow by leaps and bounds, to become in 18 years an important centre of Russian chemical and machine industries and the pride of Uzbek power engineers. It is said to embody the ideal of earlier Soviet planners of a completely electrified industrial centre, even more than its sister cities of Tashkent and Begovat, and is described as "the child of the subdued current of the Chirchik".

It had its beginnings when in the second "pyatiletka" a Kombinat was established 50 km from Tashkent to produce ammonium nitrate fertilizers by the fixation of atmospheric nitrogen and the manufacture of hydrogen from water. Thus, using no imported raw materials and relying only on power from the Chirchik, the Chirchik Electro-Chemical Kombinat sends out waggon loads of fertilizers every day. Output has been growing steadily of late, and by June 19 this year the half-year target had been reached two weeks in advance.

Most of the fertilizers produced here go to the Kashka-Darya, Bukhara and Andijan oblasts and not long ago the suitability of its produce for cotton cultivation was the subject of a conference of representatives of the Presidium of the Uzbek Academy of Sciences and of the Technical Council of the Kombinat. It was reported last March that certain nitrogen and phosphate components of the chemicals produced at Chirchik were not fully absorbed by the cotton plants. As a result, in collaboration with the Chemistry Institute of the Academy, modified fertilizers were produced in limited quantities for experimental purposes and issued to a number of kolkhozes in the Tashkent oblast to be tried out.

The newspaper of the chemical plant, the Azotchik (Nitrogen Producer), approved of the closer collaboration with the Academy. In line with directives from Moscow, it had for some time advocated fuller cooperation between Labour and Science. It had also called for a progressive Stakhanovite approach to Labour problems and of competitive drives with other chemical plants such as the Stalinogorsk Kombinat.

It has been pointed out in the press that while Chirchik is very advanced technically, it is not ahead of other parts of Uzbekistan in its level of Marxist indoctrination. The training of its Party leaders for promotion in positions of political importance has not

gone as far as elsewhere and, worse still from the Party point of view, they seem to be indifferent to the need for action in the matter to make them better interpreters of Marxism.

Another important industrial development in Chirchik has been the growth of a repair workshop attached to the garage of the chemical plant into a plant for supplying agricultural machinery to the cotton growers. Known as the Chirchikselmash, it came into being because of the good power position, but of late its production seems to have fallen badly behind schedule. Early in 1953 the management had complained of a number of shortages -- of raw materials, of dies for stamping, of cutting tools and measuring instruments. The output was much below capacity and in the first quarter of this year out of three hundred HKY-2/8 special cotton cultivators only one had been completed by the end of March.

Mention might be made of two other works in Chirchik which supply machinery and equipment of various kinds. The Central Asian Chemical Machine Trust (Sredazkhimash) produces equipment for fertilizer plants of the region, and the "Electroschit" has produced welding equipment and other tools for the Kakhovka and Kuibyshev hydro-electric schemes. This concern has quite a good reputation with the builders of the big new projects.

Power Shortages

The construction of these major power projects in the Tashkent oblast has provided a basis for the starting and expansion of modern industries. What can be done is well illustrated by the fertilizer project at Chirchik. But on the other hand, despite the big increases in power output since the revolution, there are repeated complaints in the press of power shortages. Generally speaking -- and more particularly in the case of the Tashkent and Farkhad grids -- the increase in generated power was not keeping pace with the growing economy of the republic as reflected in its new industries and the expanding domestic needs of the people.

A specific complaint related to the seasonal shortage. It was stated that not only the existing but also projected thermal stations had not a sufficient reserve capacity for the extra demands of winter and that industries well supplied with electricity in summer were handicapped in winter by shortages which would be even more serious in future.

In the cities the present supply has been proving inadequate both for domestic and community needs. At Samarkand the position has been most serious with the "Kommunenergo Trust" proving quite incapable of supplying the growing needs of consumers. At Bukhara, Kagan and

elsewhere likewise, supplies of power were inadequate, station equipment worn out and spare parts and replacements seemed to be always short. As a result in these cities it was necessary to cut supplies not only to private consumers, but even at times to industrial concerns. The complaint has often been made that in the smaller cities thermal stations are uneconomical and use up too much fuel.

The need has been felt thus not only to extend output to meet existing shortages in the supply of power, but also to allow for the potential demands of the growing industries of Uzbekistan and to be prepared for future calls. Furthermore, the needs of agriculture -- especially of the cotton cultivators -- would have to be met. It has been realized that the power supply for rural areas will have to be doubled to make possible the electrification of hundreds of kolkhoz and sovkhoz estates.

A conference was held in 1952 at which power engineers and other authorities were agreed on the need for more hydro and more thermal stations if the republic's industrial development was not to be held up. The need for thermal stations was particularly emphasized and it was suggested that these might be designed or modified to enable their boilers to use Angren coal which had so far been regarded as an uneconomical substitute for the Kuzbas coals.

The grid system, it was agreed, should be extended so that supply and distribution could be centralized. A grid actually has been in existence in the south-eastern corner of the Fergana oblast, but it does not include Kokand, Namangan and Dzhalalabad. The completion of the grid involves longer transmission lines and more widely dispersed transformers. Some municipalities have shown an inexplicable reluctance to be linked up with the grid, even though this would help them to do away with out-of-date and wasteful diesel and other generators.

Achievements Claimed

Somewhat out of keeping with the reports of shortages and failures that appear in the local press, there are also official claims of higher monthly and quarterly figures and of economies effected by the better use of resources available. Thus in April it was stated that Uzbekenergo had consolidated its position, that the quarterly output target had been reached by March 27 and that millions of kilowatt hours in excess of expectations had been supplied. A saving of 534,000 kilowatt hours had been effected in the use of power by the Uzbekenergo stations themselves, and at the thermal stations there had been a saving in the fuel consumed. The cost of power supplied to the consumer had been reduced in all by over a million roubles. The kollektiv of the Chirchik cascade had an especially good record in all these matters.

The output of power in the Kuvasai system has also been up to schedule.

In May the Kadyrinskaya hydro-electric station celebrated its 20th anniversary. It claims to have produced more power in 20 years than all the power plants in Russia in 1913. Automatic remote control has been introduced which enables the work of its four hydro-electric plants to be controlled and synchronised from a single control board. The station is well-known throughout Central Asia as a practical training school for electrical engineers and technicians.

The improved utilization of fuel by thermal generators of the Uzbekenergo system is suggested by the claim that whereas 1.1 kilogramme of fuel was used per kilowatt-hour at the time of the 18th Party Congress the figure for 1951 was down to .66 kilogrammes. Hydro-power accounted for 90 per cent of the power distributed by the Tashkent grid and the introduction of remote control led to a cut in the number of workers employed.

Electrifying the Countryside

The steps taken to electrify the rural areas of the republic merit separate description as they show many of the problems that arise when highly developed techniques are introduced in backward areas, and illustrate the difficulties incidental to a period of transition. It is a tale of inadequate facilities in some areas, of facilities not properly used elsewhere, of the neglect of local factors in making major plans, and of tardy planning and execution of plans.

In the provision of power for the countryside considerable use is being made of kolkhoz power stations and a newspaper account of the opening of one such station late in 1952 gives a very good idea of the diversity of the uses it was hoped would be made of the power generated. The station was a hydro on the Siab River in the Kaganovich kolkhoz (Samarkand oblast), a large kolkhoz power plant opened last year and the 53rd new hydro built in the republic since the end of the war.

The new plant was to provide current for 250 homes, stables, dairies and other kolkhoz buildings on the estate. All hard manual labour would be mechanised. Electricity would drive 11 motors to operate pumps to irrigate 145 hectares of cotton fields and vineyards as well as a small sawmill, two cutters for silos, a mill and a mechanical workshop, besides heating silkworm incubators.

In actual practice, however, electrification schemes for different

country districts are working with varying degrees of success. It has been said that for the whole of the republic the supply of power is far behind the needs of agriculture and that only one fourth of the kolkhoz estates are electrified. Most of these are in the Tashkent and Namangan areas where 43 per cent and 34 per cent respectively of the rural artels have power stations, although even these are only using power to drive two motors each on an average.

But if most of the estates are not making full use of electric power to modernize their methods and improve output, there are said to be some on which dozens of motors with a capacity of hundreds of kilowatts are at work. In the Stalin kolkhoz of the Kalinin raion, for example, 38 such motors are in use in the mechanisation of farms, and in the Sverdlov kolkhoz of Yangi Yul 28.

The truth of the matter seems to be that the republic has not worked out a general plan for rural electrification, the plan prepared a few years ago, and never approved, having become out of date now. The use of power varies with the seasons, rural consumers are at times at great distances from rural power stations and they are very widely dispersed; and for these reasons planning for the countryside is beset with great difficulty.

Any planning done has been undertaken in a formal, doctrinaire manner with little interest in local angles and a tendency to ignore local views and to suppress criticism. Thus, in the plan for a hydro for the Pravda kolkhoz, the particular needs of the farming processes to be served were ignored, as well as the actual demands of the kolkhoz. In the Yusupov kolkhoz of the Voroshilov raion (Andijan oblast) the planners even catered for power for shearing sheep in winter, which was described in the press as a ridiculous provision.

With this unrealistic planning it is not surprising to find the power supplied to kolkhoz estates often used more for private purposes than for the improvement of farming. This was stated in a report on 70 kolkhoz and M.T.S. power stations. The kolkhoz Uzbekistan in the Ak-Darya district of Samarkand, for instance, used only a third of its station's capacity and that too for lighting. The electric milking equipment was completely neglected, the dairy farm on the estate was badly kept and dirty, and the milk yield was low. Kolkhozes of the Komsomol district used less than 60 per cent of their station's power, again mainly for domestic purposes, while no attempt had been made to assemble the electric milking equipment and the herd of pedigree cattle was poorly cared for.

Last May it was stated that at many M.T. and M. Zh stations motors for generating purposes were being put to other uses. In many kolkhozes units supplied for electrical sheep-shearing were being used for lighting. New inducements have been offered to the workers to remedy this state of affairs. Higher rates of pay and easier norms of output for sheep shearing (50 kilos of coarse wool for spring shearing) have been fixed. Any operator achieving this limited norm receives a 50 per cent bonus over and above his contract pay. Higher pay was also offered for high quality shearing -- shearing with no damage to fleece and no cuts to the sheep. It might be mentioned that the target per sheep for 1953 was set at 2.4 kilogrammes.

The electrification of agricultural operations is considered very important as it frees men to work on the cotton fields. The kolkhozes having shown themselves unwilling or unable to take energetic steps to achieve more electrification, it was up to oblast party organs and ministers of the republic to take action; but they do not seem to have done much. The press has been very critical of the indifference of kolkhoz party officials and of the reluctance of labour cadres to use electric power to speed up their work.

Plans for Bigger Rural Hydros - and Delays

A recent tendency has arisen - analogous to the grid system in the case of major hydro-electric systems serving cities and industrial needs -- for the construction of inter-kolkhoz and even inter-raion power plants to serve the needs of diverse users of electricity in agriculturally developed regions. Until 1950, most of the kolkhoz power units had a capacity of 40 to 50 kilowatts. The subsequent enlargement and amalgamation of kolkhoz estates has made larger plants necessary in order to cope with the general development of kolkhoz economy and amenities.

The Surkhan-Darya oblast provides a good example of this process. In the past, small stations to serve the relatively small individual estates were thought adequate. Now with consolidation of the estates, it is necessary to provide inter-kolkhoz and inter-raion systems and fortunately the river and canal waters of the oblast provide plenty of power, though the delays in planning and construction are still very serious as some examples will show.

The kolkhozniks of the Sary-Assy and Uzun raions decided to build an inter-kolkhoz station on the Khazarbakh Canal. A second plant on the same canal was decided on by the workers of the Denau raion.

In the Shirabad and Angorsk raions the decision was taken to build a power plant on the Kirabad river. On the same river a second station was projected, the Derbent inter-kolkhoz station. Yet another large hydro was planned at the Uch-Kizyl reservoir in the Termez raion. Kolkhoz labour and kolkhoz funds were to be used in the construction of these works, but of course help was expected in the form of mechanical excavators and other machines which would do 90 per cent of the earth work and 75 per cent of the concrete work and thus cut demands for labour and transport. The importance of larger power units is generally agreed upon in the local press as a means to greater efficiency and cheaper power.

Yet one finds many of these vital plans taking long years to reach even the blueprint stage. Thus Khazarbakh Hydro No. 1 took three years of preparation by the institute responsible and even so the final prints had not been submitted when this plan was last heard of. The press has asked how long the much more complex Khazarbakh Hydro No. 2 and Shirabad Hydro No. 2 will take to reach the final draft stage if Khazarbakh Hydro No. 1 has taken four years to plan. The prints for the latter, it might be mentioned, were pigeon-holed for six months with the Ministry of Agriculture of the U.S.S.R. while waiting for the final approval without which work on the scheme could not start. As a matter of fact Khazarbakh Hydro No. 2 has been with the planners for two years and more while Shirabad Hydro No. 2 took a year to reach the blueprint stage. The Uch-Kizyl plant was the subject of inter-departmental exchanges for over seven months.

The delays in the planning stage are followed by other delays suggestive of inefficiency. Thus, though the 14 kolkhozes concerned had long ago provided the necessary funds and promised quotas of labour and transport for Khazarbakh Hydro No. 1 when work actually started on the scheme last April, progress was extremely slow. The kolkhoz managements failed for three months to provide the promised labour. Workers from other kolkhozes (obviously from poor estates and with the monetary consideration uppermost in their minds) had offered to work and came forward on their own initiative, but not the workers earmarked from the kolkhozes which stood to benefit from the scheme. It was clear that help at oblast level was called for in the face of this default on the part of the kolkhozes and that the Selelektro Trust with its limited means of obtaining labour could not carry out the task in the prescribed time. To obtain the labour and transport which the kolkhozes had previously promised it might now be necessary to use persuasion, propaganda and even party pressure.

The Central Asian Hydro-Electric Power Construction Trust (Sredazgydroenergostroi) has in the past been blamed for its slow

construction work and high costs. To remedy this state of affairs a bonus system was promised and the Trust also hoped to effect economies through mechanisation, more efficient management and stricter party controls.

THE ANGREN COALFIELDS

The development of the coalfields in the so-called "stokehold" of Uzbekistan, the Angren River valley, formed part of an overall plan for the exploitation of the Central Asian coal deposits which, since its inception in the early forties, has also led to the opening of new mines in Kirgizia and Kazakhstan.

The Angren deposits were first discovered by the geologists Bogdanovich and Chikryzov, later awarded Stalin prizes for their work. Vitkovich, author of a popular book on Uzbekistan published in 1951, records that, at the time of his visit to Angren, railway communications with the town were still irregular, and to reach the mines he had to board a "gang" train running first through green paddy fields and then between the Chatkal and Kuramin ridges that flank the new line on its uphill journey to the mining site. While Vitkovich names the two explorers who put Angren on the map, he also implies that it was the river itself which bared the surface coal seam. This mysterious river divides in two on leaving the mountains. One stream disappears underground (later to rejoin the Syr-Darya by a subterranean channel) thus causing a shortage of water for irrigation in the Angren's lower reaches, remedied in Soviet times by diverting the more abundant flow of the Chirchik into the Angren by means of a linking irrigation canal. This achievement Vitkovich regards as yet another example of the paramount role played by Government and Party in improving Uzbek agriculture.

The surveying of the Angren deposits on an industrial scale began in 1941 under Zakharevich, who successfully introduced a wide range of modern methods into the valley. Exploitation of the fields was hampered by difficult terrain and hydrological conditions. Thus the Angren had to be diverted into an entirely new channel, and measures had to be taken to protect the opencast workings and underground pits from flooding. It was beneath the old river bed that the surface coal seams at present mined by opencast methods had lain concealed. This task completed, the great advantages of the Angren coalfields became apparent. Most of the seams lie near the surface and lend themselves to opencast working, a factor which has already tripled labour productivity and halved production costs.

Work on the coalfield began in earnest in 1940. Despite difficult wartime conditions, a 120-kilometre railway track was soon laid; shafts were sunk, a miners' settlement was established and preparatory work on opencast mining was begun. In 1941-2, thousands of kolkhoz peasants were enlisted to help complete the narrow-gauge railway track and motor road in record time. In 1942-3, work began

on the sinking of eight mines, three of which were in production by the end of 1943. Since the early forties the progress made here has undoubtedly been considerable, thanks not only to the ready accessibility of the coal but also to the Uzbek authorities' prompt realisation that the proximity of the mines to the Republican capital and to the industrial towns of Chirchik, Begovat, Yangi Yul and Almalyk made their intensive short-term exploitation a sound proposition.

All the Angren deposits are now controlled by the Uzbekugol Trust, which is affiliated to Sredazugol, the coal combine responsible for the whole of Central Asia. Sredazugol is responsible for raising the output of its affiliated trusts from 31,000 metric tons in 1941 to 1,750,000 tons in 1952; this year it is expected to achieve a further record output of 2,150,000 tons, Uzbekugol's share in the total amounting to some 40%. The increase in Uzbekugol's share has been especially marked since 1948, when the strip mine was first brought into operation.

Angren City

In line with the increased industrial importance of Angren, both the town and its population have expanded considerably, and its attractions and amenities earn occasional enthusiastic notice in the press. It is a new town by any standards. Not until 1940 did its original settlers, mainly professional miners from the Ukraine and the Urals, appear at the mining site, and by 1941 advance consignments of Angren coal were reaching the industries of Tashkent. During the first postwar Five-Year Plan the settlement grew rapidly, and prospects for its continued expansion under the current Five-Year Plan are considered good. The Uzbek miners for their part have pledged themselves to double output by 1955, raise individual productivity, cut production costs, and make fuller use of the modern machinery reaching the mines. Houses with many storeys, a Palace of Culture and a number of cinemas have recently been added to the town's amenities, a reflection of the growth of its industries and the enhanced prosperity of its miners.

But despite favourable progress reports on these lines, complaints are also heard of deplorable delay in fulfilling the housing and road repair programmes. It is admitted that neglect by the municipality of the underground sewage, water and power networks has led to totally inadequate sewage and water supply services. These defects do not, however, seem to damp the ardour of the occasional journalist writing on Angren, who waxes enthusiastic as he describes the noble proportions of the new Zhdanov Street, the architecture of the new training college for opencast miners, the miners' clubs, and the splendid view enjoyed

from the top of Mine No.9, whence the new city suburbs, its so-called "Socialist construction site", may be seen stretching along the right bank of the river.

Angren itself is on the left bank, not far from the pitheads and the opencast workings. The whole site is criss-crossed by a tangle of excavating machinery, conveyor belts and rails along which the electrically-powered tip-wagons move in a seemingly endless stream on their journey to the main line. The coal city was bound to grow, and its growth has been sped by the manifold uses that can be made of its higher grade coal. Two new secondary schools are to be opened, a municipal meat combine is to be built, and the local bakery to be further enlarged. It would seem from reports of this kind that many improvements had been introduced since 1948, when the Tashkent press was still referring to Angren as a typical "mushroom" miners' settlement and tending to stress the numerous defects (some of them still extant) in its planning and administration. The roads obviously still mud roads at that stage - were said to be badly cut up and in filthy condition winter and summer alike. The municipal hospital was housed in a dilapidated building. It was then admitted that the Party workers on the Angren local Soviet had become "divorced" from the population, and drastic measures were recommended to remedy this state of affairs and to suit living conditions to the needs of the inhabitants. That the attitude of the Soviet and Party representatives and organs censured in 1948 has not yet been outlived is however evident from complaints in this year's press of their high-handedness and of the way in which they run municipal affairs more in the spirit of overseers than in that of servants of the community.

Shortcomings in the mines

There are numerous shortcomings in the running of the Angren mines, many of which have serious repercussions on deliveries under the State Plan. It was for instance admitted in June that mining machinery was not being used to full capacity, and often remained idle through the incompetence of miners or engineers; exploitation of surface coal-seams by opencase mining was uneven; many workers failed to fulfil their daily norms; the "cyclic" method had not yet been everywhere introduced into the mines, and labour discipline generally was at a low ebb. It was stated that although statistics of average output might show work norms to have been usually fulfilled, this did not necessarily mean that all field production units were working at a uniformly high level; it might equally well mean that a deficiency in the planned output from, say, Mine No.9 had been concealed in the quarterly statistical progress reports, because it was cancelled out by an equivalent increase in the output from some opencast site.

Despite high average output statistics, full use of excavating machinery was certainly not always made, though it was optimistically predicted that it would be by the end of 1955, when all extraction processes would be fully mechanised.

The grading of coal

Apart from the shortcomings already mentioned, which were said to be common to the mining methods of most Central Asian coalfields, certain specific allegations of failure disturbing to the consumer were made. Grading of coal at the opencast workings was not up to the mark; it was therefore recommended that more sorting and size-grading machinery should be installed, so that the consumer could be supplied with coal of four different qualities. Even taking into account the additional expense of grading coal in the mines, first-quality Angren coal still cost $2\frac{1}{2}$ times less than the imported product. But it now appeared that Uzbekugol was not paying sufficient attention to proper grading, and while it had exceeded its planned delivery quotas of "bulk" coal by over 16% in the first quarter of 1953, its deliveries of graded coal for the same period dropped to 82%. Even the grading machinery at present installed at the coalfield was not being fully utilised by the Trust and the Angren management. The capacity of the conveyor was 5,000 tons per 24 hours, but not more than 1,500 tons was put through for grading, and that only under dry weather conditions. In wet weather delivery of coal to the grading machinery stopped altogether. Graded Angren coal was in demand on the Tashkent railway, and for fuelling the so-called "mobile power stations", and greater use of it might also have been made in stoking locomotive-type boilers.

A recent report on the Tashkent trunk line stated that the use of Angren coal mixed with Karaganda coal was becoming more widespread. On the initiative of locomotive brigades 15-30% of Angren coal was being mixed with Karaganda coal, and certain "enlightened" engine drivers had brought this up to 50%. It was lately established that the use of Angren coal on the Tashkent line had led to a saving of 3.5 million roubles in 6 months. The economic implications of this were far-reaching, as the cost of carrying coal from Angren to the locomotive sheds of the Tashkent line was seven times cheaper than the cost of transporting it from Karaganda. As graded Angren coal could also be used in cotton-drying plants, hospitals, schools, bakeries and homes, it was of paramount importance that the management of Uzbekugol should improve the quality of their deliveries by stricter grading and produce those qualities most in demand by the population and industries of Uzbekistan and the neighbouring republics. This had not yet been achieved by 1952 when deliveries of "bulk" (i.e. ungraded) coal still

predominated.

Transport Difficulties

Another serious and persistent defect was the inadequate work at the Uzbekugol railway sidings, where wagons were often delayed for over 12 hours instead of 9. The annual total of such delays was impressive (20,950 wagon-hours in 1952) and the mines were obliged to pay large fines to the railway administration. Angren station itself was especially weak in the matter of loadings, and in the rotation of loaded wagons, which were subject to constant delay. For this its stationmasters could scarcely be blamed, however, as the post of stationmaster at Angren was arduous and extremely difficult to hold. No less than six were replaced in 1952, presumably because they had proved unequal to coping with the irregularities of colliery transport. Notwithstanding the changes it still proved impossible to establish proper control over the Pravoberezhnaya (Right Bank) Station. Over a 10-day period early in 1953 the stationmaster of the Angren Main Station visited Pravoberezhnaya only once, though 99% of the Angren traffic was dispatched there, and Angren's loading plan, and consequently that of the entire branch line, depended on his efficiency and vigilance. In 1953, Angren miners and the transport section of Uzbekugol pledged themselves to deliver 85,000 tons of coal above the prescribed plan. This demanded the fullest coordination between the miners and the transport section. But in fact the Angren railwaymen worked two shifts, the miners three. The change-over from one shift to another was not synchronized, with the result that work was interrupted 5 times in 24 hours. Again, through lack of organization, a quarter of the freight transport available was wastefully run empty to and from the pits.

Complaints of the poor working of the Angren branch line are nothing new; they have been periodically made ever since 1948, when it was first suggested that the rapid expansion of the mines was being handicapped by the inadequate transport facilities of the Tashkent line, which was capable of meeting only 70-80% of the coalfields' requirements. It was then pointed out that the waggons, instead of being fed to the mines in a continuous stream, were sent only in large batches with which the pits were often unable to cope. As the mere provision of extra sidings and bunkers at the Pravoberezhnaya Station would not meet the situation, it was proposed that to satisfy the growing demands of the coalfield the entire length of the line should be overhauled; that the sidings at every station should be extended and an adequate water supply ensured; and that the miners' living conditions should be improved. (So poorly equipped was the Angren branch line in 1948 that most sidings had no scales, and freight had to be weighed either by superficial measurement or visually, at a glance.)

Planning the Future

A recent republican conference of the Uzbek branch of the All-Union Society for Technical and Scientific Knowledge, discussed how to promote a more rational and up-to-date approach to the use of local fuels and of Angren coal in particular. The following facts emerged in the course of the conference:- The mining of coal at Angren first started during the war years. Opencast mining was not begun until 7th November 1947, however, since when output had risen by leaps and bounds. In the early pioneer stages of exploiting the deposits the coal was not graded or processed for the market, and thus acquired the reputation of being of poor quality, with a high ash content and low calorific value. But with the tremendous increase in output, the deeper working of the outcrop seams and the introduction of grading, quality improved appreciably. The ash content of dry coal from cutting No.1 was now only 12.3% and its calorific value had risen to 3,600 kilogram calories, a conclusion confirmed by repeated tests at the Tashkent thermal station and by an expert analysis made in the first quarter of the current year. As regards ash content per thousand kilogram calories, Angren coal was now considered to be one of the best brown coals in the Soviet Union. It was most important to realise this, since even in scientific papers on the structural designs of boilers submitted in 1952, obsolete data which should by now have been discarded were still consistently used. In the opinion of the conference Angren coal could be put to even more varied use if Sredazugol's present policy of improving quality and enforcing stricter grading were implemented. Forceful protests should, however, be made against any attempt on Sredazugol's part to revert to the exploitation of poorer seams or allow delivery to consumers of coal with a higher ash content, a step which would nullify the favourable results so far obtained.

One of the chief defects of Angren coal was its high moisture content, sometimes reaching 40%. As the calorific value of the coal would amount to 4,260 calories if the moisture content were lowered to 20%, resolutions were adopted urging that it should be dried, either in the seam before extraction or in the Angren stackyards.

The notion that its pronounced self-combusting properties made Angren coal unsafe for storage was refuted by delegates to the conference, who pointed out that small quantities for household use could be conserved for long periods without any danger provided they were stored in a depression or hollow and covered with a thin layer of earth. Large quantities could be stored in open heaps: a heap of many thousand

tons had for instance been kept for over two years at the Tashkent thermal station without losing any of its properties. The conference also came out strongly in favour of speeding the manufacture of briquettes at Angren.

Among other press references to Uzbekugol were optimistic forecasts that the efficiency of the trust's workers would increase as more qualified miners and technicians were trained. Last year 247 excavator operators, drivers and electricians were said to have attended special training courses, while 560 miners improved their qualifications by attending technical courses and stakhanovite schools. Nor were Socialist Emulation drives neglected at Angren. Output had been increased in honour of Miners' Day at Mine No.9 where productivity had risen by 6.5% in 1953; prospecting for new seams was to exceed plan by over 6%, and the miners' aktiv had launched plans for reducing the cost of extracting and handling coal.

The Gasworks

There have been frequent allusions to the construction of a gasworks and the laying of a pipeline from Angren to Tashkent, and to the importance of the works to the economy of the oblast. At the same time it was rather cautiously recommended that the gasworks should be built up gradually, in stages, so as to avoid putting too great a strain on the finances of the Trust. Judging from a press report in June that scientists were still trying to work out how to use Angren coal in the manufacture of gas, the gasworks do not seem to have materialized so far, though their completion is envisaged in the current Five-Year Plan. (This press reference is at variance with the statement, made in Shabad's "Economic Geography of the USSR", that "Angren is linked by rail and coal-gas pipeline with Tashkent, and furnishes coking coal to the Begovat mills". (p.396).

The Angren Valley

Considerable attention has for some time been given to the general development of the Angren Valley, which is rich not only in coal but also in other minerals used in building, cement and brick manufacture, etc. Silicates and other raw materials from the valley can for instance be used in the chemical industry, and there is an abundance of kaolin. According to Vitkovich, a cement works was already under construction in 1948, but more recent references suggest that like the gasworks it is in the blueprint stage.

Briquette Manufacture

There has been much talk of building a briquette plant. A report stated in June that it was under construction, but a later press exhortation to Sredazugol to expedite their plans for

briquetting would seem to indicate that this long-mooted project has not yet been realised. The household use of Angren coal has hitherto been limited by reason of its rapid pulverisation on drying. The promoters of the briquetting project argue that with Angren brown coal as a base, the briquettes would not need a binding agent, and could be widely used for stoking railway engines and locomotive-type boilers.

THE POSITION OF WOMEN

The Soviet Union as a whole is pledged to a policy of complete emancipation for women. This involves an entirely new attitude to the female sex in regions where the Islamic tradition is strong and where in addition social and economic forces combine to keep girls from being educated in their earlier years, and later from taking part in any but the traditional callings allowed to them, whether as wives and mothers or as unskilled workers in the fields. In Uzbekistan, which is in many respects the most advanced of the Central Asian Republics, the authorities are very concerned at the slow progress made in the education of women. Women are not sufficiently active in the work of the Communist Party or in courses of indoctrination designed to qualify them for advancement in the Party hierarchy and in industry. This is taken to be a measure of the general lack of education of women and of the persistence of the old-fashioned attitude towards them.

Defects in the political education of Uzbek women were the main item on the agenda of a recent plenary meeting of the Uzbek Central Committee, and after considering reports presented by two secretaries, A.I. Niyazov and S. Kamalov, the Committee called for an active struggle to overcome old religious ideas and feudal notions regarding women by more educational work, especially among women themselves. The failure of many women, especially in the country districts, to take part in political work, the lack of facilities for their higher education, and their exclusion from responsible posts, especially on farms, were noted, but the Committee also condemned prevailing attitudes of the people which slowed down progress. For the manifestation of the feudal attitude that is so much in evidence party organs were blamed as not having paid enough attention to political work. Courts and public prosecutors were criticized for undue lenience towards offenders against the law giving equal rights to women.

The implicit admission that social reform cannot move faster than local opinion will allow has to be reconciled with the impressive statistics offered to the outside world and to such visitors, for example, as the Indian women's delegation which came to Tashkent last July. In the Supreme Council of the U.S.S.R. there are 14 women representing Uzbekistan; in its own Supreme Soviet, and that of the Kara-Kalpak A.S.S.R., there are 166, and in local soviets 14,901 women members. The republic has thousands of women doctors, teachers, artists and social workers. It has 13 women doctors of science and 220 "Candidates of Science",+ most of them from the urban intelligentsia and not from the rural areas or from the lower income groups. Of 142,335 party members (including 25,416 party candidates) in Uzbekistan, about 20 per cent are women, though it is not said what proportion is of Uzbek origin. Membership of the Komsomol has grown to over half a

+ Roughly equivalent to an English B. Sc.

million in the autumn of 1952, and of the 367,000 admitted since the previous Komsomol census, 118,000 were girls.

Uzbek and Non-Uzbek Women

But whatever the statistics, due allowance must be made for the large number of non-Uzbek women included. The party has been concerned over the lack of native Uzbek women in posts of responsibility and has criticized local bodies, industries and even prominent party members for their neglect, and for persisting in the old-fashioned attitude. The impression derived from press reports is that local bodies often resist new ideas from outside the republic, and injunctions to give women equality of treatment are carried out in a half-hearted manner and with little effect. For example the Nukus Town Party Committee was reported in April to have given responsible political posts to only two women though it had a list of at least 40 women, of whom 24 were of native origin, available for appointment. When asked the reason, the Secretary declared that these women had been exempted from such work as they had children to look after.

So also in the Fergana oblast the number of women in key positions is negligible. Last year the Fergana Town Committee, and the raion committees of Kuvasai, Kaganovich and Buvaidin had not given a single woman a post of responsibility. Tashkent Oblast had only 49 Uzbek women among the lecturers of the Society for the Advancement of Political and Scientific Knowledge and only 25 of these were actively lecturing; of the total of 25,440 propagandists only 396 were Uzbek women. The same state of affairs prevails in the Kashka-Darya, Surkhan-Darya and Andijan Oblasts. In the Mirzachul raion of the Tashkent Oblast, party officials were indignant to find that political work among women had been totally neglected, only two per cent of the women attending party study groups. While there are good party reasons for concern over the poor level of indoctrination among Uzbek women, it is clear that the degree of emancipation achieved by them is closely related to the degree of political education received. Professional advancement being linked with political qualifications, it follows that in an oblast in which no importance is attached to the political education of women, the general attitude of the leading party figures towards them must be reactionary and a survival of the feudal age.

Besides realizing the need for more intensive political work among women to sharpen their communist understanding and eradicate all submission to what is called "feudal-bai treatment", the Communist party also stress the importance of the Russian language, fluency in which has an "emancipating" value. This subject has been brought up at Party conferences in 1952 and 1953 and is likely to recur until a satisfactory standard is attained.

But in spite of all party pronouncements, in practice party and Soviet bodies are reluctant to do enough about the promotion of women in the political hierarchy. The question has been kept alive, but action taken has been slovenly and inefficient. Proper guidance has been lacking from bodies which should have provided it. For example the Surkhan-Darya Oblast Committee has given no clear guidance to the aktiv of local cells in their work among women. In some parts of Uzbekistan, even after women had been raised to higher executive posts, they received little co-operation in the difficulties of settling down, and this often reduced their prospects of success.

Educational Problems

A major factor in the emancipation of women is education. Here too there are complaints of general apathy in quarters where real interest might have been expected - apathy at all levels from the highest to the lowest. Thus at the University level, not enough practical interest has been shown in getting girls to enrol at the State University, the Agricultural Institute or the Central Asian Polytechnic. In spite of the need to recruit girls from the ten-year schools to the Vuz (Higher Educational Establishments), directors of such establishments are keener on recruiting young men, and these too mostly from city schools. Other critics state that although cotton is the republic's main commercial crop, only 85 of the 4,220 students in the nine technical schools of the Ministry of Cotton are girls; that Uzbek women working at the higher level of post-graduate work as scientists constitute an even smaller fraction of the total figure; and that the number of women receiving professional training at FZO (Factory and Workshop) schools is not more than one per cent of the total. Courses of lectures on political and cultural subjects for women are less advanced; thus acknowledging the lower educational level of women.

As in the other Central Asian republics, there are complaints that many girls are not even sent to kindergartens. Such reports come from Surkhan-Darya, Kashka-Darya, Bukhara and Kara-Kalpak; and from Shirabad raion it was stated that not only had 115 girls not been sent to school at all, but those who had were sometimes called away to work in the fields and were not able to cope with the school curriculum. A glaring instance of the way children were used to do work came from the Akhunbabaev kolkhoz where, on a cold day in January, the kolkhoz chairman mobilised 45 school children to clean the aryks of the kolkhoz without troubling to ask the permission of the school principal.

In order to check the tendency of girls to leave school and get married, and also to give girls with the ability for higher study

the chance to study in a secluded atmosphere, away from family complications, so that they might eventually enter Vuz institutions on passing out, increasing attention has been paid of late to the establishment of boarding schools. Bukhara alone planned 65 such schools, and 10 special boarding schools have also been started for the children of shepherds. Of 3,000 children enrolled as boarders about 2,000 were Uzbek, Kazakh and other Central Asian girls. The need to stop the wastage of educational facilities through girls leaving school prematurely to get married is illustrated by a report from one school -- Denau School No. 24 --where 10 girls left to get married.

Women in Agriculture

In the drive to grow more cotton in the republic, women workers are expected to play a big part. Thousands are in fact doing the hard manual work which still cannot be done by machinery -- digging up the soil with ketmen (spades) or watering the fields and looking after the aryks. In 1952 in the Tashkent oblast some women were promoted to higher and better paid posts and as many as 394 were foremen of cotton brigades, while about 4,000 of the zveno, the primary labour units in the fields, were under women. A few obtained administrative posts as members of kolkhoz management boards or audit committees. In Tashkent Oblast 30 women were secretaries of primary party cells and 61 chairmen of rural councils. But in Andijan Oblast there has been a fall in the number of women kolkhoz chairmen from 14 in 1950 to only four last July. One reason advanced is that the enlargement of kolkhoz areas demands greater technical knowledge, or greater authority. In the oblast not a single woman is working as tractor driver, brigade mechanic or district agronomist.

In the Syr-Darya raion there are admittedly many women workers of progressive outlook and political maturity, with stakhanovite records in their work and experience of cotton cultivation; but a woman brigade foreman is still a rarity. In fact, last July only six women headed cotton-growing brigades and only one was acting as a kolkhoz chairman. The training of women was not going ahead -- at the Kommunist kolkhoz, for instance, of 45 trainees taking agrotechnical courses in specialized work only two were women, while in the Kaganovich, Stalin and Leninabad kolkhozes there were none. Things are no better as regards political education; women's councils on kolkhozes are very inactive, and only 16 women in the entire raion are receiving political education, of whom only three are kolkhoz farm-hands. In the Kara-Kalpak Autonomous Republic there has been a fall in the number of women brigade and zveno foremen.

A reason advanced for the general backwardness of women in agriculture is the hard nature of the work and the lack of openings

which offer prospects of promotion suitable for women with or likely to have children. No crèches have been organised at the Frunze and Kommunism kolkhozes of the Upper Chirchik raion nor, according to a recent report, are there arrangements for hot meals for working mothers and their children. The managements of many of the kolkhozes, and the aktivs of party cells, are apparently indifferent to the needs of those women who, in spite of advanced stakhonovite records, are still only half literate.

At the Stalin kolkhoz(Khodzhiabad raion), where two thirds of the workers are women, little is done to provide for their special needs. The crèche lacks proper furniture, soft bedding or trained personnel. Not a single lecture for women was arranged at the kolkhoz during the whole of the last summer.

Recruitment for Industry

In January 1953, 44.5 per cent of the labour force in Uzbek industries consisted of women; in the light industries and food works the corresponding ratio was later estimated at over 80 per cent. But among these women the Uzbeks were in a minority and likely to remain so since their recruitment had been slowed down. Many plants undervalue the need for such recruitment and in the Stalin and the Dzherzinsky Textile Kombinats in Fergana few Uzbek women are employed.

The authorities are alive to the need to recruit Uzbek women, and in August it was stated that the Tashkent Oblast Committee and Town Council had promised to engage 2,000 non-Russian women for the Stalin Textile Kombinat. But in the first half of this year the plant had a mere trickle of new workers because recruitment schemes had not had enough publicity in the Oktyabr, Stalin, Moskva and Kirov quarters of Tashkent.

No better results have been achieved elsewhere in Uzbekistan. The Frunze raion of Tashkent oblast reports that no permanent cadres of women workers have been created and that the number of women in industry is small. At the Textile Kombinat, although most of the workers are women, only three per cent are Uzbeks. At the Sredazkhimmash few women are employed and these have little chance of promotion.

The general complaint of Uzbek women is that in industry they are usually given minor posts and little chance of qualifying for better jobs. Just as few have got to the top in the kolkhozes, so in industry few have made progress, and curiously enough the Trade Unions have not shown any keeness to help their women members professionally, either in stakhanovite schools or at training groups. A shining exception is the Andijan Division of the Tashkent Railway where women work in the

locomotive and waggon sheds, and in the routine inspection of rolling stock. Some of the more advanced among them compete with the best workers of either sex as welders, assistant engine drivers and other specialists.

Reforming Traditional Attitudes

At the root of the whole of this very human problem of the relation between the sexes lie the traditional standards of value of the people. For centuries it has been the practice in these parts to seclude women from the gaze of men, to allow a man more than one wife and to treat women as an asset for which a price may be paid. These practices still persist - and in the homes of men and women who are considered prominent public figures, as well as in the old and less advanced town and country areas.

Pravda of October 4, 1953, contained a remarkable article under the heading "Live Exhibits" telling of some prominent offenders against the new code of sex equality. One was a former head of the Tashkent City Education Department; another a highly placed education authority of the oblast, a man who made fine speeches on the education of women but had three wives! In the Tashkent oblast, of the 463 Uzbek girls who were in the seventh class in 1948-49, fewer than half completed their schooling, many leaving to get married.

The examples that can be given of the persistence of feudal survivals in the treatment of women are too numerous to list. The newspaper Kyzyl Uzbekistan last August told of the experiences of the Uzbek writer Abdulla Kakhar during a tour to study the women's movement in the Namangan area. He found that even in the raion capital, Namangan, women went about veiled, using a perforated table cloth as a substitute for the orthodox veil, which is not now made in The USSR and cannot be imported. At a meeting of women activists in Chartak he saw most of the women veiled in this way, and the woman chairman, elected against her wishes, sat with her back to the gathering. Women on a kolkhoz in the same district were even veiled in the presence of kolkhoz leaders and neighbours. In Uichi during 1952-53 not a single girl completed her ten-year schooling.

The treatment of woman as a chattel is evident in the continued payment of "kalym" (bride-price), which is even taken for school girls who should have a more independent outlook.

Even professional women of some standing have felt the repercussions of the old-fashioned attitude to their sex. The Pravda article referred to above also mentions a former Deputy Minister of Agriculture, Karima Avlyanova, and two former leading Communist officials -- Fatima Yuldashbaeva and Shafaat Salyamova -- both now confined

within the walls of their homes. At the Navoi Theatre in Namangan the run of Gogol's "Revisor" had to be cut short as no understudy was available to take the place of the actress playing the part of Marya Antonovna, who had had an accident. In the ballet of the theatre only two girls had stayed in their posts, the rest having left to find other jobs in shops, on buses and the like. The gossip that went on and the insinuations that the girls had to endure were too much for the majority of the dancers.

K I R G I Z I A

SUGAR-BEET CULTIVATION IN KIRGIZIA

The growing of sugar-beet in Kirgizia began with the experimental sowing of 15 hectares in the Frunze district in 1925. Today hundreds of thousands of hectares are under the crop which in parts of the Chu Valley -- known as the "sugar valley" -- covers as much as 108,000 hectares, or 92.7 per cent of the area under "technical cultivation". There are a number of large sugar refineries in the area, the one with the best record being in a town whose name, Kant, comes from the Kirgiz word for sugar. The increasing use of machinery and of fertilizers has helped to raise output and is expected to raise it further in the current five-year development period. It is hoped in fact to step up overall production for the republic to 65 per cent over the 1950 figure and to harvest beet at the rate of 425 centners per hectare as against a figure of 401 centners in the year 1940.

Following the first satisfactory pilot project, an increasing area was put under sugar-beet till in 1932 the area sown was 3,400 hectares. By 1935 it was 8,500 hectares and the latter figure was more than doubled in 1940. Now the crop is raised in about 200 kolkhozes as against 173 in 1940. These are distributed over various districts, including Kalinin, Stalin, Kaganovich, Voroshilov and Kant, the latter being the main producer in the Chu Valley.

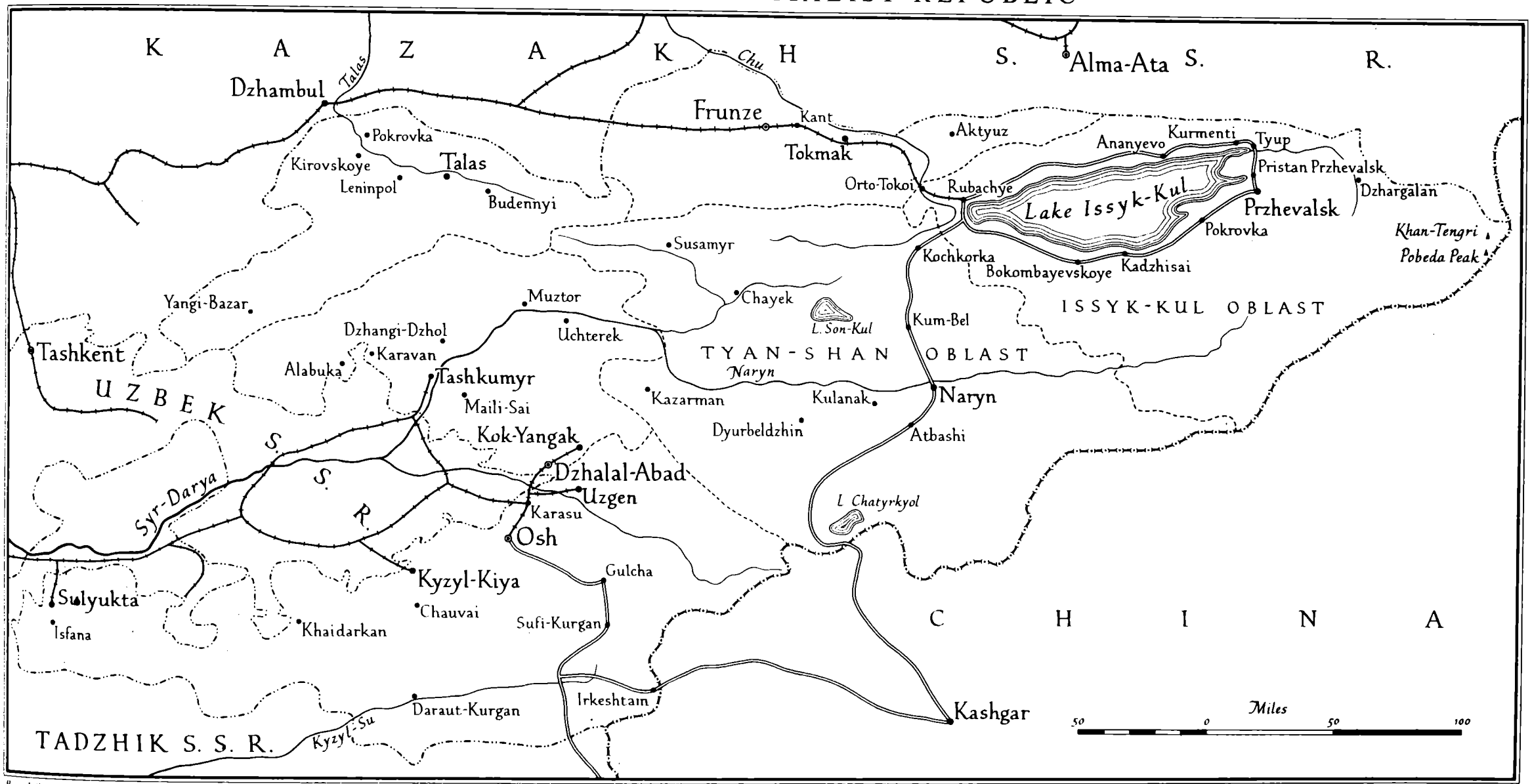
Output and Soil Conditions

The following table gives the average output of beet in centners per hectare for the years for which the figures are available:

Years	Centners per hectare	Year	Centners per hectare
1932	77	1939	382
1933	89	1940	401
1934	125	1949	326
1935	144	1950	420
1936	328	1952	224
1937	332	1953	415 (target)
1938	302	1955	425 (target)

It is clear from the table that there has been a drop in the output

KIRGIZ SOVIET SOCIALIST REPUBLIC



Royal Geographical Society

per hectare since the war and that cultivation will have to be intensified if targets are to be achieved. In the Kant district before the war production was at the record rate of over 400 centners, but for the last five years, except for 1949, the fixed quotas have not been produced. In 1952, of the 15 kolkhozes growing beet on a large scale only the Trud kolkhoz reached its target. While the Trud and Kalinin kolkhozes obtained between 372 and 376 centners in 1952, the Third International, Stalin, Mopr, Bosbormak and other kolkhozes under similar climatic and soil conditions could only produce from 149 to 248 centners. There were individual exceptions even in these kolkhozes; in the Kalinin kolkhoz, for instance, one team reached 560 centners and another 473 centners per hectare.

Generally for the whole of Kirgizia the output in 1952 averaged only 224 centners as against a target of 395, but over the Frunze region there were a number of collective farms with good results to show including the Krasnaya Zarya in Kzyl-Asker raion with 397 centners: the Molotov in Voroshilov raion with 388 centners and the Trud, already referred to, in the Kant district. Wherever good figures were reached these were in a large measure due to better techniques, the use of chemical fertilizers and to general efficiency in cultivation. On the other hand failures to reach targets are put down to four general causes -- the placing of targets too high; the lack of water or irrigation; inadequate mechanisation; and labour shortage.

From the following figures obtained from kolkhozes in the Kant raion the effects of good irrigation and the extensive use of fertilizers will be apparent. Most of the land in the lower Chu basin needs irrigation and marshy areas need careful draining.

	1932	1935	1936	1940
Average yield: Centners per hectare	82	192	345	472
Number of waterings	2.0	4.0	6.5	10.5
Number of soil preparations	1.0	3.3	6.4	10.3
Fertilisers used in kilogrammes per hectare	63	92	354	498

A further factor which is said to bear on the output of sugar-beet in recent years is referred to in the Sovietskaya Kirgizia. This is what the paper calls the waning interest of Soviet and party organs in the cultivation of sugar-beet and the resultant indifference to bad organisation on the kolkhozes and in the M.T.S. The introduction of scientific improvements and improved farming practices is not being stimulated by these bodies.

Mechanisation

At present over 80 per cent of the sowing, cultivation and harvesting of sugar-beet has been mechanized. In 1951 more than 1,000 Soviet designed triplex sugar-beet combines were produced. These SKEM-3 combines uproot the sugar-beet, remove all leaves and pile the roots in heaps for transport to the factory. But about 15 to 20 per cent of the roots are not properly cleaned, while from two to five per cent of the sugar-beet is not dug up and has to be recovered by hand.

In practice it is vital that the best use should be made of the machines available for cultivation. To get even 300 centners of sugar-beet from one hectare without using machines involves the sovkhozes and kolkhozes in an average outlay of 100 to 120 man-days. The mechanization of the operation is a matter of national importance.

The M.T.S. are accused of not helping the kolkhozes to make the most of the farm machinery pools during 1952, although the Council of Ministers of the Republic and the Central Committee of the Communist Party are quoted as refusing to lower the mechanization level set for sugar-beet cultivation.

Instances of dereliction of duty by the M.T.S. are cited in a more recent issue of the Sovietskaya Kirgizia. It states that tractors which should be at work on the plantations are often sent on to other tasks. Instead of a tractor cultivating ten to twelve hectares a day, it is not unusual for tractors which are actually in the fields to cover less than one hectare. The average in certain cases was: in the area of the Don Aryk M.T.S., about one hectare; in the Stalin M.T.S. area, 1.6 hectares; in the Alamedy M.T.S. area, 2.6 hectares. The quality of the work was also said to be very poor.

The paper tells of arrears in the delivery of the crop to the sugar refineries. Lorries are available in sufficient numbers for the task and with proper organization can transport the crop in good time, but in September there were 16,000 centners of beet lying in the fields of the Stalin raion and 20,000 in those of the Kalinin and Chu raions. In all more than 100,000 centners were on the plantations awaiting transport. The press stresses the need for speeding up the delivery of the harvest to the factories and for raising sugar production, which is the special charge of the Chu valley kolkhozes.

Organisation and Labour

Problems of organisation receive some share of the blame for the drop in output in recent years and the fall in the number of brigades and teams with high outputs. Experts have called for a toning up of

the discipline of the labour forces on the plantations, for more output per worker and for stricter adherence to schedules of work. They have asked the Frunze papers to launch a campaign for better quality farming and the best use of experience gained from experiments in advanced methods.

A typical instance of deterioration in the standard of work is provided by the Gigant kolkhoz. After the war its output was the highest in the Chu Valley, averaging 600 centners per hectare. Five of its workers became Heroes of Socialist Labour and 47 peasants won various Soviet orders and medals. Since 1948 there has been a steady decline, and in 1952 even the planned production quota was not reached. This downward trend was fairly general in the republic; 1952 output rates were 102 centners per hectare below those of 1949 and work was on the whole less scientific. There were individual pledges of higher output. The Frunze kolkhoz promised to produce at the rate of 600 centners and individual teams even promised to grow 800 and 900 centners; but the overall situation was unsatisfactory early in 1953

The labour position receives a good deal of critical comment in the local press: it is stated that many peasants on kolkhozes do not take any part in the production of sugar-beet; they do other work or just stay at home, while many others never reach their working norms; on most collective farms no watering teams are ever organised and large areas are covered with weeds and the average growth of sugar-beet is poor.

Absenteeism is a serious problem. To take one case, a brigade consisting of 64 women on the Molotov kolkhoz had a record of between 18 and 33 members absent every day between May 17 and May 29, 1953: this represented an average daily absence of 32 per cent of the total labour force. In this kolkhoz last year 180 centners of beet were grown per hectare and it was only expected to produce 415 centners this year in an area of 350 hectares. In spite of the high rate of absenteeism, increases are made in the allocation of "trudodni" (man-days) to individual peasants. One team was allotted 115 to 120 "trudodni" per worker during the month of May and, while over the whole kolkhoz 63,500 man-days were allocated to beet growing, in 1953 the allocation was 113,900 that is, nearly double.

The Council of Ministers as well as the Central Committee of the Communist Party of Kirgizia have pointed to the unsatisfactory state of affairs in the kolkhozes of the Chu, Petrovski, Kalinin, Stalin and Kirgyl-Asker raions. They have said that many of the secretaries of raion Party Committees and presidents of Executive Committees rarely visit the kolkhozes or the teams of workers concerned with sugar-beet plantation, and do not know the situation

in these estates. For the bad state of affairs in the whole of the Frunze oblast the oblast party committee and, many raion party committees are held responsible.

Sugar Refineries

Some mention may be made in conclusion of the sugar refineries in the republic. The first refinery was a small one built in Frunze in 1928; later came larger works at Kant (in 1932), Karabalty (1935) and at Troitsk, Belovodsk and Tokmak.

The Kant sugar-beet factory is considered the best in Kirgizia, though in August 1953 the Belovodsk plant took the prize in the "socialist emulation drive" of the Kirgiz Sugar Trust for the completion of its reconstruction ten days ahead of schedule. Its daily output has been raised, the working of the filter pressure station has been improved, sugar losses and the consumption of lime have been cut and to reduce the loss of sugar in the molasses a supplementary mixer-crystalliser has been installed.

Earlier the Kant refinery, after modernisation of its installation, had produced thousands of tons in excess of its quota.

The capacity of all sugar refineries in the Soviet Union is to be raised by between 25 and 70 per cent between 1950 and 1955 and the refineries of Kirgizia will have a capacity of between seven and eight per cent of the total for the Soviet sugar industry.

Sources

1. Sakharnaya Promyshlennost 1953.

2. Sotsialisticheskoe Sel'skoe Khozyaistvo 1953, 1952.

3. S.S. Sergeyev: Rasshirennoe Vosproizvodstvo i Nakoplenie v Kolkhozakh Chuiskoi Doliny. Moscow 1950.

4. P.V. Golovin: Tekhnologiya Sveklosakharnogo Proizvodstva. Moscow 1951.

5. M.Z. Saburov: Pyatyi Pyatiletni Plan Razvitiya S.S.R. na 1951-1955 Gody. Moscow 1952.

6. Sovietskaya Kirgizia 1953 January-October.

T U R K M E N I S T A N

PUBLIC HEALTH

A 55-per-cent increase in the number of physicians and a 25-per-cent increase in the number of hospitals in the republic of Turkmenistan in the last five years give a fair idea of the expansion of public health services that has been going on side by side with the development of the country's economic potential. In the budget of the republic for 1953 611.1 million roubles were allocated to public health, social security and education, an increase of 71.5 million roubles, or of 13.2 per cent, on 1952. Out of this total 179.7 millions were for public health and physical education and 34.4 for social security services. A supplementary grant of 9.5 million roubles was made in the budget for the improvement of hospital amenities -- food for patients (3.4 millions); special drugs (2.8 millions); "soft" furniture (1.7 millions); hospital and household equipment (1.6 millions); and the repair and maintenance of medical installations (0.5 millions).

Apart from the republic's budget allocations, the Soviet Union budget contributes a considerable amount in the way of allowances for unmarried mothers and mothers of large families. These family grants in Turkmenistan totalled 32.4 million roubles in 1952 and 17.3 millions for the first six months of 1953.

Health Personnel

Health personnel -- doctors, midwives, sisters and male nurses -- are trained by the Turkmen State Medical Institute and other medical schools of the republic. The Institute celebrated its 20th anniversary early in 1953 when its research work during 1952 was also reported upon. In its 20 years the Institute, which is located at Ashkhabad, the capital of Turkmenistan, has seen some 2000 physicians and surgeons graduate, besides accepting 101 theses from advanced workers. Most of the doctors trained are now practising in the rural areas of the republic. The present attendance of students at the various study circles is over 300.

But while doctors are being turned out in hundreds every year, there is still a considerable shortage of all grades of public health personnel in the country and particularly in the rural areas. Many parts of the country are difficult to reach, shepherds in the pastoral areas are often cut off from the outside world for long periods, and the problems of medical services to the scattered dwellers and workers in desert areas are further complicated by the fact that surveying parties are continually changing their headquarters. Even in the capital the shortage of trained male nurses leads students of the

Medical Institute to do nursing work with the result that when they have to go to the country for summer practice, the town hospitals are very short of nursing staff. There is also a grave shortage of trained chemists and here too parts of Ashkhabad are affected no less than rural areas. In the Lenin district of the capital there is only a single chemist's shop, located in a house where prescriptions are taken, medicines made up and customers wait (at times for hours) in a single room the atmosphere of which is stifling.

Public Health Services in the Towns

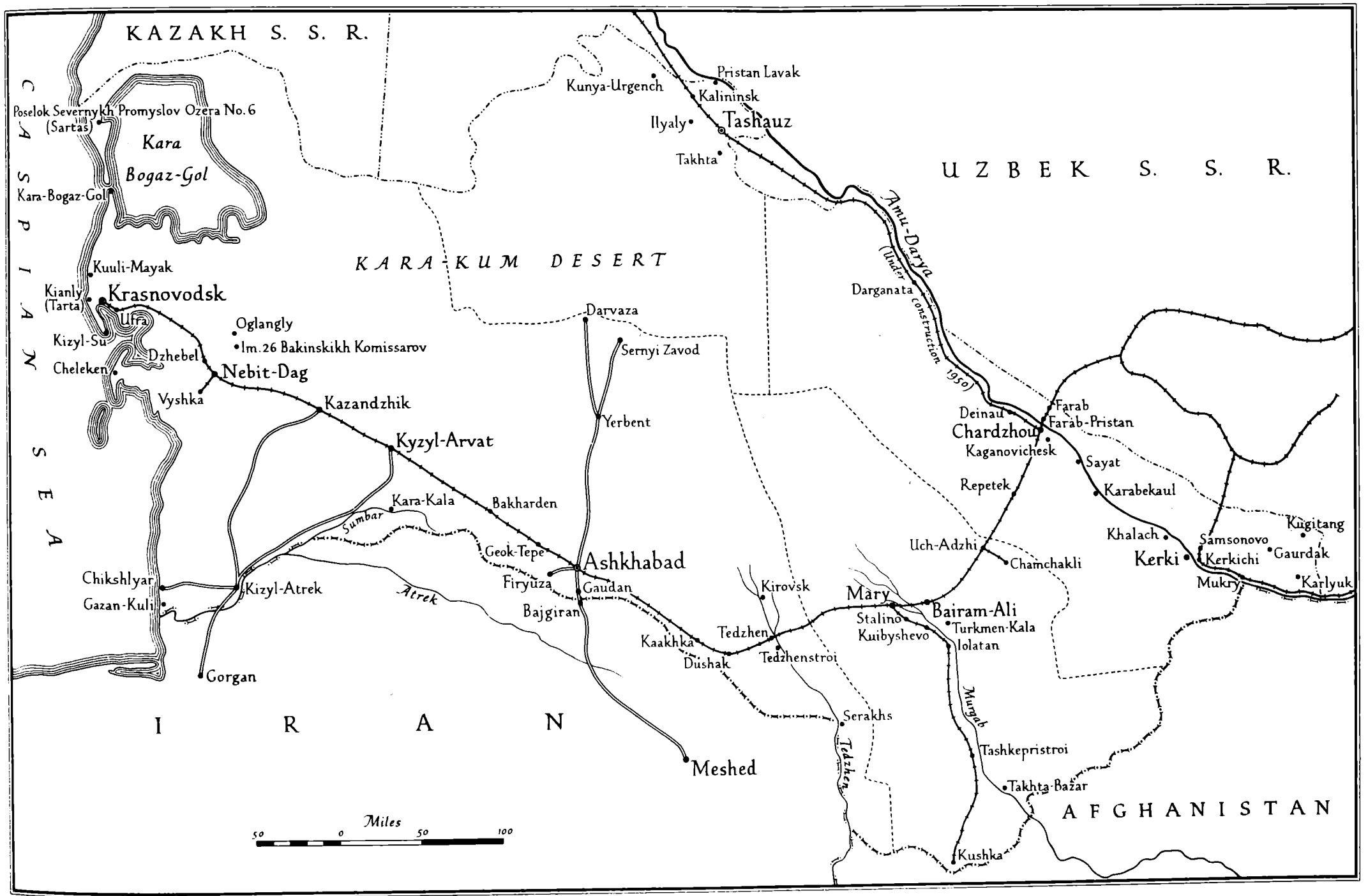
The provision for the first time of a national health service is thus proving a slow process which must be carried out only as the personnel, buildings and equipment are made available. In the initial stages complaints of inefficiency come in from various sources and are reflected in press comments.

The building programme is not being carried out everywhere on time. Hospitals at Leninsk (Tashauz oblast), Molotovsk (Chardzhou oblast), a new clinic at Ashkhabad and a new building for the Turkmen State Medical Institute are still under construction. The Turkmenneft Combine are behindhand with the building of a new hospital at Nebit-Dag. At Kazandzhik a new hospital and town dispensary are nearing completion and a staff of 19 doctors has been appointed. Krasnovodsk oblast has already 26 town hospitals, one village hospital, eight nurseries and 24 consulting centres for women and children, employing between them 144 doctors and 410 sisters and other medical personnel.

With shortages of one kind or another and with a great deal of bureaucratic routine to be followed, the service in towns to patients in hospitals is liable to be unsatisfactory. One finds the complaint made that even in Ashkhabad patients often have to wait for hours for admission. They may have to come as early as 6 a.m. or 7 a.m. but registration is delayed for a long time. There is a great deal of form filling to be done and the signatures of several physicians and other officials have to be obtained. At the Ashkhabad Clinic No. 1, doctors and nurses take a mid-morning break of from thirty to forty minutes while the queues of patients are kept waiting. Patients have to walk from room to room looking for doctors who are not in their appointed places and often in the end the pharmacy at the clinic is unable to supply drugs like penicillin and syntomicine.

Ashkhabad has a single "sanitary-bacteriological" laboratory located in two rooms which has to serve the needs of all the hospital , clinics and dispensaries in the town. As a result a child who has to be sent to a holiday camp has to wait five days for the analyst's report. The Lenin raion in Ashkhabad has only one

TURKMEN SOVIET SOCIALIST REPUBLIC



Royal Geographical Society

hospitals and -- as mentioned earlier -- only one chemist's shop. There is a general shortage of pharmacies and they all labour under difficulties.

At the Yolotan hospital rooms are dirty and filled with flies, while furniture, beds, sheets and clothing are all inadequate.

The first aid service in Ashkhabad is in need of ten more doctors. Old ambulances are falling to bits with no one to repair them.

Rural Health Services

The rural areas have their own problems. In the kolkhozes of Turkmenistan small stores are being established to supply the peasants with the medicines they need. During the first half of this year 500 new stores were opened to bring the total number to 2,300 and a further 2,000 are to be provided in the near future. In several grazing areas in which the shepherds are cut off from the outside world for many months each year, nursing and midwifery services have been organised.

Complaints about medical work in the country districts are also common. The press refers to the unsympathetic and even brutal handling of patients in provincial hospitals. In Bairam-Ali it is said that patients coming from villages 30 or 40 kilometres distant have to wait for hours in the street to be admitted into the local hospital. Often the X-ray department of the hospital is closed owing to lack of current and no effort is made to inform patients, who often have to return to their homes without treatment. Students in the technical school in the same town get no medical attention and at the vaccination centre there is no attempt at sterilization.

Medical Work in the Desert

Medical services in the extremely hot regions of the desert call for special organisation and the Ministry of Health of the republic has been at special pains to overcome the difficulties encountered, particularly in the area of the Great Turkmen Canal which is to link the Amu-Darya with the Caspian Sea. The project extends over more than 1,100 kilometres across the desert and the various units at work along this strip -- like the many local parties of the Gidroproekt (Hydro-project) scattered over the area at distances of hundreds of kilometres from their headquarters -- depend very greatly on the mobile medical and nursing stations which are being set up.

Transport is a major problem here. The lack of motor transport is adding to the difficulties of the health organisation in the desert, which should have its own mechanical transport including a motorized sterilization unit, an X-ray unit, a mobile laboratory and a mobile pharmacy. All of these should be mounted on half-tracked vehicles.

Air transport is also being used for first aid work and the evacuation of stretcher-cases from the desert, as well as for flights to areas not easily reached by lorries and other vehicles. A medical air station is usually attached to every medical unit and it has at least three planes as aircraft must fly in pairs in the desert.

To the mobile medical sanitary units which were already operating in the Kunya-Urgench and Yaskhan Lake areas early this year have been added other units in the Takhia-Tash and Kazandzhik areas. It is planned to set up mobile medical centres in the "takyrs" or clay plateaus in the sandy desert in which the survey parties usually set up their camps and in which water reservoirs already exist or will be built. The wireless stations at the camps are thus available for the health workers. The work of the centres will include the protection of the health of the building staff, sanitary inspection of local settlements, general protective measures for workers on the project and the local population and a number of prophylactic and disinfectant measures.

Special medical missions often visit the canal zone. A deputation of the Moscow Institute of Skin and Venereal Diseases collaborated with the Tashauz Skin and Venereal dispensary in a considerable project in 1951. Another specialist team headed by a professor from the Ashkhabad Medical Institute carried out research in the Tashauz province in 1952.

The continuous changes of headquarters of survey parties makes it difficult to organize dispensaries in the Main Turkmen Canal Area. A number of dispensaries are being opened to serve the drillers, transport workers and geologists scattered in small teams along the canal zone. The lack of transport makes vaccination difficult to carry out.

As the population grows and new settlements appear, the old health centres have to be expanded and new ones started. Small hospitals with from 100 to 150 beds are to be organized in the area.

A number of diseases will call for special attention. Dysentery and typhoid have to be fought and typhus and tuberculosis are a recurrent threat. The malaria-carrying anopheles mosquito breeds in water-reservoirs along the Amu-Darya and the control of all depressions with standing water is of great importance, as also is the medical inspection of all new arrivals in the area to check

infection. Research will have to be done into many problems connected with these complaints but at present the health services cannot carry out this important task.

Then there are many problems of sanitation and preventive medicine to be faced. The health education of the people is to be started with lectures in the settlements of the canal zone, but educational literature on health problems is very short. The all-important matter of a good water supply has to be faced. Drinking water is obtained mainly from deep wells or holes filled with rain water, but proper filtering equipment is often lacking. The climate makes food preservation a major problem, but refrigerators are not available and even mobile refrigerators installed in lorries are not to be found in the zone. Another need which has to be met in the future is that of protective measures for the safeguarding of the human skin from the ultra-violet rays of the strong tropical sun.

Sources

1. Sovietskoe Zdravookhranenie 1953.

2. Feldsher i Akusherka 1953.

3. Turkmenskaya Iskra January - September 1953.

Note:

The possible abandonment of the Canal Project since the appearance of the material on which this article is based should be borne in mind.

CULTURAL DEVELOPMENTS IN TURKMENISTAN

Reports on cultural developments in Turkmenistan gain considerable prominence in the Republic's press and range over education, literature, history, printing and publishing, and libraries. Emphasis is continually laid on the growth and development of cultural activities by comparison with the pre-revolutionary period. In nearly all articles and descriptions of cultural activities the theme of Russian tutelage and mentorship is well to the fore and failure to derive the fullest inspiration from Russian culture is steadily deplored. Impressive claims of achievements in education, in publishing and the literary arts are to a considerable extent off-set by accounts of shortcomings and by criticism.

Education

An indication of the importance attached to education can be found in the fact that in the budget for 1953 21.5% of expenditure was earmarked for education. In January the press announced the total number of schools open in the republic as 1226 with 218,500 pupils attending them. These totals included over 30 technical colleges and 6 Vuz (higher educational establishments) attended in all by 13,000 students. It was also claimed that the standard of teachers had so far improved that during 1953-54 it would be possible to bring compulsory middle school education into operation at Ashkhabad, the oblast centres, and at Nebit Dag. At the same time, complaints of shortcomings in the educational field are frequent and vigorous. Chief among the defects is the failure of party Committees in the control and management of schools of all kinds. Particular mention has been made of the inefficient organisation for ensuring that young people engaged in industry or working on kolkhoz estates have their educational requirements attended to. For instance, at the Ashkhabad Shoe Factory, out of 140 young people employed there, only 10 were undergoing evening classes, and at the Mechanical Workshops only 17 out of 161. Although the number of girls regularly attending higher school forms has grown, the boarding schools which are now regarded as the best medium for female education, are considered unsatisfactory.

The academic qualifications of teachers in general are still found to be far too low. Even the three Teachers' Institutes in the Republic can only boast a total of 10 masters with degrees of "Candidates of Science", and there is not a single professor or Doctor of Science among their entire staffs. The Tashauz Teachers' Institute is specially criticized for using in the teaching of Turkmen literature an old programme which recommends the study of ideologically faulty

texts long ago discarded as out of keeping with Marxism.

In spite of the large school attendance figures, the progress of children within the schools does not appear to be satisfactory. The greatest barrier seems to be the fifth form beyond which a large percentage of children experience difficulty in advancing. At a school in Geok Tepe, of 31 pupils due to be moved up into the sixth form, only 18 were successful. There are also many complaints of children failing to attend school at all, especially in the Ashkhabad and Chardzhou oblasts. The shortage of equipment and visual aids for the teaching of chemistry and physics result in instruction in these subjects being far too theoretical. Another serious defect is in the matter of textbooks, many of which contain errors of composition and ideology, their translation and editing being in the hands of a small group of educationalists who even included "bourgeois nationalists" in their number.

Last April the press brought to light the extraordinary case of No. 33 school at Yolotan. This primary school was on the payroll of the Ministry of Education and regular reports had been submitted to the local raion committee with details of the students attendance, diligence, behaviour and punctuality. The pay of the director and teachers was regularly disbursed. Everything, in fact, was in order except that of the 18 pupils listed as being in regular attendance, all had long ago dropped out and were found on enquiry to have forgotten all about their school days. The continued existence of this school of "Dead Souls", as the press styled it, was attributed to the fact that the director had managed to "square" the visiting inspector of the raion committee. Although this instance need not be regarded as typical of all rural education establishments in Turkmenistan, it does indicate that attendance statistics and reports of achievements in the educational field must be accepted with some caution.

The Gorki State University of Turkmenia and the Academy of Sciences seem to be fairly well established. The University has five faculties, viz. physics and mathematics, geology and geography, the biological sciences, law, and literature and philology. The last named faculty has sections for the study of the Turkmen language and literature, of Russian language and literature, including Church Slavonic and history. Arrangements for post-graduate work are made by the Academy of Sciences. The normal course is three years; annual monetary grants are provided, and students from other cities are given accommodation. Admission both to the University and to the Academy of Sciences is dependent upon students passing an examination in Russian and Russian literature, while for certain faculties of the University a test is necessary in one other foreign language. Candidates for the Academy of Sciences have also to be well versed in the fundamentals of Marxism-Leninism. It is noteworthy that Russian students at the

Academy of Sciences are only required to have a knowledge of the Turkmen language if they intend to make a special study of Turkmen language and literature.

Literature

That modern Turkmen Soviet literature is a product of the Soviet October Revolution is the main thesis of all Soviet literary critics and historians. It is at the same time maintained that this literature can grow to further maturity only under the benign influence of Russian classical, and of the modern Soviet literature of the whole Union. While readily conceding that Turkmen writers have shown marked improvement in their creative efforts as regards artistic and ideological approach, the critics point to many shortcomings. One of these is the absence of the proper treatment of the "new" life led by such elements as the Vyshka oil workers, the Ashkhabad railway workers, and the Soviet intelligentzia, including its non-Party section. The theme of Turkmen friendship with the Russians and other peoples of the Union is also said to be neglected. This criticism is extended to Turkmen translators of Russian works, who are often poorly qualified for their work and do scant justice to the works of Russian genius.

Although major importance is attached to modern literature, considerable attention is devoted to classical poetry and to the transcription of oral literature. Soviet writers make great play with the fact that before the Revolution only a few imperfect editions of the works of great Turkmen writers appeared in such cities as Tashkent, Kokand, Astrakhan and Kazan, and that it is only since the Revolution that authoritative editions have been published. The bulk of the so-called classical Turkmen oral literature has been handed down by the Bakhshis or strolling minstrels who are described as follows by P. Skosyryev in his popular book Turkmenistan:-

> The "Bakhshi" or strolling minstrels were the guardians of the riches of classical Turkmen poetry, and disseminated it among the people: these minstrels were a curious phenomenon in the life of the native villages.
>
> The Bakhshi was a wandering singer, story-teller and musician, and often a poet as well. The Turkmen language had special designations for singers and musicians; "singer" was "aidymchi"; "musician" was "dutarchi", "tyuidukchi" or "gydzhakchi" (depending on which instrument he played;

on the dutar, the tyuiduk, or the gydzhak). For poets, there was also a special word, but the Bakhshi was at once a minstrel, a musician, a poet, a guardian of popular wisdom, and a recorder and vehicle of national poetic consciousness.

The repertoire, tastes and memory of the minstrels had to take the place in the Turkmen village of such institutions of city culture as a library of books and music, as a school of music and singing, and as a literary and artistic periodical. From the songs and tales of the minstrels, the hearers learnt of their people's past and of the great affairs and peoples of Asia.

The names of famous minstrels were long preserved in the memory of the people. The Turkmens were not accustomed to distinguish one or another period of their history by the names of shahs or emirs, as was done in Khiva, Bokhara or Kokand. In point of fact, the separate Turkmen tribes did not have emirs or shahs ruling vast and populous territories. Periods in Turkmen history were defined according to the names of illustrious singers and poets. "That was",- the old shepherd or daikhan would say, "when Egen-Oraz-Bakhshi had not yet finished singing his songs", or "Kurban-Bakhshi was still taking lessons from Anna-Nazar then." And thus the exact time of the event was determined since each Turkmen well knew just when it was that Kurban-Bakhshi spent some time studying under the famous Anna-Nazar, or when Egen-Oraz laid down his dutar and renounced his singing.

The minstrels, indigenous creators and repositories of Turkmen folk-lore, were also the chief popularisers of classical works, only certain parts of which were noted down at the time of their creation.

The Turkmens became acquainted from their earliest years with the finest examples of their classical literature, hearing them rendered by the minstrels.

This allowed classical national culture to have a constant and profound influence on the popular consciousness despite the fact that the people remained illiterate and hardly came into contact with city culture at all.

By far the greatest figure in Turkmen literature is the poet Makhtum Kuli, a Russian translation of whose works has been published in five volumes. Makhtum Kali was born in the first half of the 18th century and is said to have inspired other well-known poets such as Shabende, Zelili, the satirist Kemine and the lyrical poet Molla-Nepesa, many of whose works have been transcribed and published. Makhtum Kuli is now held up as a pioneer in the struggle for liberty against the feudal bais and khans. Some of his work, however, seems to belie this claim, and Professor Charyev was recently taken to task for describing as positive and progressive one of Makhtum Kuli's poems which calls upon the people to remain loyal to their khans and bais in order to retain their independence from foreign domination.

A notable figure among the moderns is Ata Kaushutov, author of a number of novels and short stories. His work, though popular, has gained a mixed official reception; some of his earlier books were much criticised and he was called upon to revise them. His latest book of stories, "The family of the hunter Kandym" seems to have been generally approved and is said to provide evidence that this author has now outlived his earlier errors. According to reviewers, these stories are permeated with ideas of a contented Union brotherhood and of the future joint destiny of the Russian and Turkmen peoples. Kaushutov endeavours to prove that, so far from being mere marauding tribes, the Turkmens only took to arms in order to defend their freedom and independence. These were in no way impaired by the Russian conquest which ensured for them the support of a powerful and hospitable people. A character in one of the stories declares "Could our khan have withstood the onslaught of his enemies? Even if he had beaten Persia and Khiva, beyond their borders was the lair of a more poisonous dragon. Have you not heard of the British?" Although Kaushutov is now considered ideologically sound, some of his stories are criticised on other grounds. In one of them he describes a kolkhoz as it existed in 1932, and he allows his imagination to run wild when he describes the kolkhozniks of those days as living in modern western houses, sleeping on beds, and eating their meals at tables. This is criticised as rubbish, since in 1932 the struggle against the Kulaks was in full swing and traditional customs obviously still in force.

Although Kaushutov may always have been sincere in his attempts to conform to party directives, he has not been uniformly successful

One of his earlier novels, which gained high praise when first published and was twice reprinted and translated into Russian in an abridged form, has now been subjected to strong ctiricism. One of the heroes in this novel was a Russian with the name of Pyotr Morozov who is, however, divested of all characteristically Russian traits and made to appear as if he were a Turkmen. He has a swarthy complexion, and on his right cheek the scar of the "Pendinskaya Yazva", a boil caused by the infected bite of a mosquito and very common among Turkmens; he is well versed in old Turkmen customs and sings Turkmen rather than Russian songs; and towards the end of the novel he even discards his Russian name, assuming the Turkmen one of Khoshgeldi when he joins a Turkmen fighting unit. The critics deplore this tendency to introduce a single Russian character, apparently merely to satisfy the requirements of the Russian-Turkmen friendship theme. And surely, they say, the author did not imagine that friendship and brotherly relations between Russian and Turkmen united in any common cause meant that they should renounce their national characteristics. The way in which Morozov is presented even carried the subtle suggestion that for a Russian to become a Turkmen was a more glorious and honourable thing than for the Turkman leopard to change into the Russian bear.

Other modern prose writers whose works have gained attention are Berdi Kerbabaev, and Sarykhanov, two of the former's books "The Final Decision" and "Aisoltan from the Land of White Gold" having been awarded Stalin prizes. Both these books have been reprinted several times in Russian and have evidently also been translated into other foreign languages.

The press constantly inveighs against the absence of literary criticism on the sound basis of socialist realism. Turkmen writers are accused of standing too much on their literary dignity and of being too sensitive to criticism. They evidently resent the high demands made on their execution as well as criticisms of the ideological content of their writings. In spite of the directive on this subject issued by the 19th Party Conference, there is a continued absence of detailed critical analysis of current literature. Soviet Edebiyati the organ of the Turkmen writers guild, has been severely attacked for failing to include anything except purely perfunctory reviews, which were without background or interpretative matter. Not a single article has so far appeared on such vital matters as the meaning of socialist realism, or the significance of such expressions as "the creation of types" and "positive hero". The first issue of the new magazine "Kommunist Turkmenistana", which appeared in April, contained a frontal attack on the low standard of Turkmen literature as a whole. In this magazine, as well as in the report of the April joint session of the Institute of Language and Literature in the Academy of Sciences and the Turkmen section of literature of the State University, the accent was on the crying need

for the revision of literary themes by which is evidently meant the need for associating creative literature more closely with political requirements. The importance of creating a literature for children has also been recently emphasised and it has been decided to reproduce special Russian editions of some of Tolstoi's and Marshak's stories accompanied by Russian - Turkmen glossaries.

History and Archaeology

As in the other Central Asian republics, great efforts are being made to give the necessary political angle to historical writing. Much of the traditional oral literature, and particularly the popular epic, Korkut Ata, is considered to militate against current requirements. Korkut Ata is said to be impregnated with pan-Turk and pan-Islamic ideas and it is the duty of historians, journalists and writers in general to eradicate from the mind of the people all such harmful and reactionary notions. But the nationalist abberrations prominent at one time among the bourgois-nationalist clique of Abdalov, Karyyev and Kosaev, has not yet been finally eliminated. A formidable advocate of the reactionary point of view has been Professor Charyev, whose dissertation on "Turkmen Social and Philosophical Theories in the 18th Century (Makhtum Kuli)" is still made the object of vigorous criticism. According to Charyev, the high level of culture attained by the Turkmens during the 18th century was the product of the inherent genius and wisdom of a united people who, in their struggle against the foreign invader, were actuated by principles of honour and justice. He maintained that it was on the foundation of the traditional cultural heritage retained in the consciousness of the people through epics like that of Korkut Ata that the Turkmen language and literature, as well as a complete social and philosophic outlook, had come to fruition under the Soviet regime. He actually claimed that the Turkmens had never been enslaved by the Shah of Persia, the Emir of Bokhara or the Khan of Khiva and that even before the great October Revolution they were a homogeneous and free people without class distinctions. All this, the critics say, is not only historically false, but it is contrary to Marxist principles since a society based on exploitation cannot be a classless one. Moreover, Charyev's thesis implies that the Turkmens did not need any help or guidance from the great Russian people in order to gain their independence; in fact, he denies the part played by the Revolution. In 1951 Charyev promised to revise his more objectionable statements, but in his later work he has merely discarded the name of Korkut Ata and persisted in his idealization of feudal customs and achievements. It is noteworthy that in spite of the apparent unorthodoxy of his opinions, an article recently written by him in collaboration with the historian Veselkov on Makhtum Kuli for the new Soviet Encyclopaedia has now been approved with only minor alterations.

Archaeological work of some importance has recently been carried out in the South-West of Turkmenistan by the South Turkestan Archaeological Expedition which has recently returned to Tashkent. Among the many important discoveries made by this expedition were about 700 more or less complete records and 200 fragments dating back to the Parthian dynasty in the first century B.C. These records, which cover several decades of Parthian history, were written in ink with a brush on clay pottery. They consist principally of estate inventories and details of taxes paid by vineyard owners in the neighbourhood of Nissa. These discoveries are claimed as the most ancient written records so far found in Central Asia, and it is thought that they would form an important contribution to the study of the history of Parthia from original sources rather than from Greek, Latin, Syrian, or Armenian texts and writings, or from much later records in Arabic.

Much work has recently been done in the collection and collation of republican archives, and 2 central, 5 oblast and 48 raion archive repositories have been established. Over half a million documents and files dating back to 1881 have now been filed and registered in these repositories.

Libraries and Bookshops

The Republic's network of libraries and bookshops is reported to be working satisfactorily. Particular mention is made of the "Party Libraries" which are intended as centres for the enlightenment of party "agitators" on matters of communist theory and on various methods of publicity, and also to provide party members and the non-party intelligentsia with appropriate reading matter relating to communist doctrines. The library in Mary is considered to be particularly efficient since, apart from the ordinary stock of books, it contains much material on the economic development of the Mary oblast during the 5th Five-Year Plan. This includes information on the Mary cotton mills, and on the new power station which is shortly to provide the city and oblast with an additional 1500 kilowatts.

The sale of books is reported to be booming, and during 1952 the Cooperatives have sold one million more roubles worth of books than in 1951. This is taken as an indication of the increased craving for enlightenment among kolkhoz farmers. During this year, 12 new book-stalls have been attached to cooperative stores in the Mary, Ashkhabad, Tashauz and Chardzhou oblasts. Criticism has been levelled against the managers of trading outposts in rural areas for adopting too commercial an attitude. They were too keen on the profitable disposal of more saleable articles to concentrate on the distribution of books to outlying areas. During the first half of the year, the

Turkmenbirleshik (Turkmen Cooperative Network) should have taken over from central stores one and a half million roubles worth of books. In fact, however, it only took over 800,000 roubles worth.

The present total of bookshops and stores in the rural areas is given as 32 larger bookstores, 70 book-stalls and counters attached to Cooperatives, and a number of open stalls, and stalls attached to schools.

Printing and Publishing

In commenting on the present volume of publication, the press frequently repeats that whereas in pre-revolutionary Turkmenistan there was not a single newspaper, magazine or book printed in the Turkmen language, and only 2 Russian newspapers, the Turkmen press now consists of 6 republican, 8 oblast, 47 raion and town newspapers, and 9 magazines. The total circulation of all these exceeds 300,000 copies. 13 volumes of Stalin's works have already been translated into the Turkmen language, as well as the writings of Marx, Engels and Lenin.

Press reports on the state of local printing presses in two widely different centres are of some interest. In the town of Tedzhen a relatively remote locality, but close to the Persian frontier, the printing press has recently been equipped with modern machinery and a private power-station. In the large and important city of Krasnovodsk, on the other hand, where 4 newspapers and much government stationery has to be printed, the press has been allowed to deteriorate, and the oblast newspapers "Kommunist" and "Stalin Yoli" are still being printed on machines installed in 1932 which have to be repaired almost daily. The establishment of 42 compositors is short by 18 and most of those working are not fully qualified. Similar deficiencies are reported in the Hasan Kuli press. This appears to be still without electric power, the plant indented for, which should have been supplied this year, having been directed in error to Kizyl Arvat which has no shortage of electric power.

K A Z A K H S T A N

The Karaganda Coalfields

What was in 1926 only a small settlement with a mere 150 inhabitants in Central Kazakhstan has since grown into the modern industrial city of Karaganda, capital of the biggest civil division of the republic, with a quarter of a million citizens, over a hundred schools and colleges and a number of engineering workshops. The key to the transformation has been the surveying and development of the extensive deposits of coal in the region, coal that was previously only mined to supply a local copper-smelter. The investigations of Soviet geologists showed that the coalfield extended over about 2,000 square kilometres and held reserves which they calculated to be around 54 billion tons. Development, started in 1931, has seen Karaganda rise to third place among the Soviet Union's coalfields -- in the wake of the much better known Kuznetsk and Donetz coal basins.

The Karagandaugol Combine now comprises the following coal producing trusts; 1. The Leninugol, 2. The Molotugol, 3. The Stalinugol, 4. The Kirovugol, 5. The Kalininugol, and 6. The Karagandauglerazrezy (Open-cast Exploitation Trust). In addition to these coal producing trusts, the Kazakhuglerazvedka (Kazakhstan Coalmine Survey) Trust undertakes the prospecting for coal in new areas; the Glavkaragandashakhtstroy (Main Karaganda Pit Construction) Trust controls the sinking of new mines in this region, while a number of other subsidiary organisations attached to the Karagandaugol Combine are responsible for the building of housing accommodation and for the supply of technical equipment and raw materials such as pit props.

Karaganda, capital of the oblast of the same name, is about 370 kilometres north-west of Lake Balkhash and, though Kazakhstan is not particularly well-off for railways, the city is approximately midway between Petropavlovsk and has a number of valuable links with other important economic centres. Through Petropavlovsk, it is now connected with the Trans-Siberian Railway; through Mointy and Chu it is linked with the Turksib railway and with Alma Ata, the capital of the republic; and finally, through Akmolinsk, it has a connection with Magnitogorsk and the Ural industrial zone. The last is perhaps the most important link as the chief use found for the big and growing output of Karaganda coal has been to keep the industries of the Urals supplied with fuel.

Coal output and schedules

Figures for coal production in the region show a series of rises

in almost geometric progression. In 1940, after nine years of development, the annual output was 6.4 million tons. In 1951 it was nearly three times as great, and the year before the target figure of 16.4 million tons was exceeded by six per cent. The current five-year plan envisages an increase in 1955 of 61 per cent over 1950 for coal extraction, and a rise of 54 per cent in coking coal over the same period. The output of coal concentrates is scheduled to increase by 140 per cent during this period.

Other big improvements aimed at in the current five year period are a 50 per cent rise in labour productivity in pits and workings and a 67 per cent increase in mine sinking and building work. Through all these measures the cost of production per ton is to be reduced by 20 per cent and that of building by 25 per cent.

Current performance suggests that for the entire coalfield the targets set for the five years will be achieved. The production programme for coking coal and steam coal as well as for coal products from the processing plants, was exceeded during the first half of 1953. Coal production was 4.8 per cent above that for the first half of 1952, and the output of concentrates was 20.4 per cent above the corresponding figure for 1952. More than 30 per cent of the Karagandaugol Combine pits reached in 1953 the figure for coal output fixed for 1955. The productivity of labour was six per cent higher than it had been a year before and all round economies had effected a saving of five million roubles. For the whole combine, in fact, for the first eight months of this year the output schedule was more than fulfilled, though several individual mines were falling in arrears.

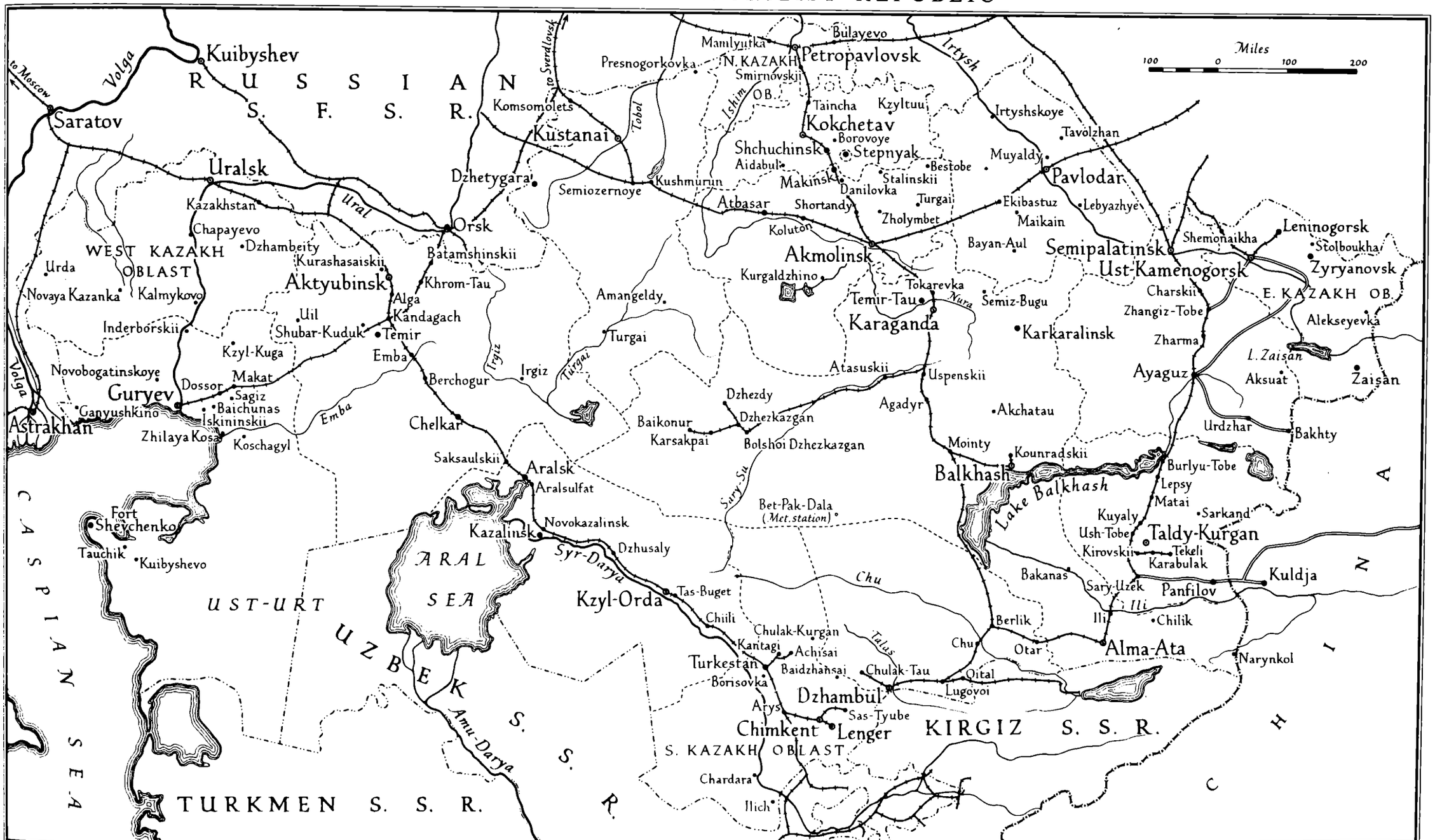
Techniques and Production Increases

How have production figures been raised in recent years?

Three factors have been mainly instrumental. These are firstly, the increase in mechanized methods of coal and rock cutting and loading; secondly the adoption of the cyclic method of working by many pits; and finally, the widespread adoption by the Karagandaugol Combine and its units of the idea of the "socialist emulation movement."

The increased mechanization of the mines is illustrated by the fact that in 1953 four times as many mechanized units were in use over the whole coalfield as in 1940. In August this year between 60 and 62 per cent of the total coal output was obtained by the use of combined cutting and loading machines. The number of these machines in use given last January was about 100. A number of the mines of the Karagandaugol Combine, including Mines No. 1, 31, 31 (b), 37, 38 and 64/83 are completely mechanized. In 1952 there was an increase of nearly a third in the number of pits in which mechanized loading at the coal-face took place, as well as in the number of combined cutter-

KAZAKH SOVIET SOCIALIST REPUBLIC



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loaders over the figures for the previous year.

Not only were more cutter-loaders in use but their productivity during the first half of this year showed a 27 per cent increase over early 1952, having reached an average of 7500 tons a month as against a target of 7400 tons. In this period mechanized coal loading increased by 15 per cent. Many individual cutter-loader teams yield between 14,000 and 18,000 tons a month. In a competition drive to exceed the figure of 20000 tons, a number of operators of combines were able to exceed 23,000 tons.

Nearly half the pits are equipped with "Donbas" cutting-and-loading machines, chiefly used for working thick seams. The "UDPT" cutting-and-loading machine, the "UPME" coal-loading machine and other types of coal-and rock-loading machines are also in use along with other items of heavy electric machinery, scrapers, belt conveyors, and other equipment. Soviet experts hope that by 1955 mechanized loading at the coal-face will raise eighty per cent of the coal mined at Karaganda, and if this is to be realized, the delivery of combined cutter-loaders specially designed for working steeply dipping and thin slanting seams will have to be speeded up.

Along with the new techniques there has arisen a new grading of the mineworkers. In the new professional cadres the operator of the combined cutter-loader holds the most prominent position among the miners in the pits, and the excavator mechanic enjoys that status in the open cast workings. It is usual for personnel involved in mechanization to be trained for more than one job and to be able to carry on a few connected operations. Soviet technical journals emphasize that the organizers of coal mining on the cyclic basis, the operators of cutter-loaders and the mechanics handling coal-and rock-loading machines have the main roles in the mechanization of mining.

During the year 1952-53, along with the introduction of new extraction techniques, the idea of operating on a cyclic plan and following a strict schedule was introduced in a number of the pits and open-cast workings. This involves the organising of operations in complete cycles of 24 hours. The introduction of this method in all mines is expected, but so far only a minority of the pits have started it.

Following the example of the Donbas and Kuzbas miners, the workers of the Karaganda coalfields have pursued the practice of the "socialist emulation drive" in which they compete with one another in the effort to achieve maximum output and maximum efficiency, and thus to exceed the targets set for them by the planners.

The model mine for the whole field is Mine No. 31 of the Kirovugol Trust. Five of its six pits operate on the cyclic basis. In all pits coal-loading has been mechanised at the face and rock-loading is carried out mechanically at 70 per cent of the preparatory tunnels. What can be achieved by increased mechanized loading at the coal-face is shown in the following returns from this mine:

	1949	1952	% increase
No. of pits on cyclic method	---	5	
Percentage of coal mechanically loaded at coal-face	36.6	97.8	
Average daily coal output	1860	2452	32.4
Labour output: tons per man	32	51.5	60.3
Average miner's monthly wage in roubles	1335	1577	18.1

Defaulting Mines

The picture of the better mines achieving 1955 targets in 1953 and of cutter-loader teams racing to achieve twice or thrice the normal output against a setting in which for the whole coalfield the planners' figures are on the whole just being achieved, suggests that the efforts of the better mines and workers are just sufficient to offset the shortcomings of the less efficient.

This is borne out by criticisms in the Alma Ata daily, Kazakhstanskya Pravda, which points out that in many of the mines the organisation of work is unsatisfactory and that most of them do not follow the cyclic system. In fact, only about 40 per cent of the working coal-faces of the Karaganda basin are on this system, and even of these only 50 to 60 per cent are reaching their set targets of output. The shortages of defaulting mines in the first eight months of 1953 totalled 200,000 tons of coal. In the preparatory drifts the cyclic method is just being introduced.

Nearly half of the mines do not keep to scheduled costs and hundreds of thousands of roubles are spent in excess of allocations. The coal from over a third of the mines has a high ash-content, while half of the pits of the Leninugol Trust ignore the rules limiting the ash-content. In Mine No. 20 (b) there are frequent accidents and suspensions of work and mechanized equipment is often idle. The mine has been behind its schedule for the past three years. Other mines that have not been working well are Mines No.

18 (b), 19 (b), 31 (b), 37 and 56/62 which include some of the fully mechanised ones and the managements are blamed for the inefficient organisation of mining operations.

As against the performances of cutting-and-loading units that treble the normal quota, it has been admitted that a big proportion -- about 70 per cent -- of the cutting-and-loading machines employed at Karaganda do not achieve the norms set for them. Half the heavy cutting machines remain idle, and of 42 that are operating only 16 fulfil their output quotas. Generally speaking the mechanized equipment freely available in the coalfield is not used to its full capacity.

Machines are often under repairs for long periods. The mechanization of coal-loading at the face at mines with steeply dipping, medium thick or thin seams was delayed at a number of mines, including Mines No. 3, 3 (b), 18, 18 (b), 20, 20(b) and 56, because the special cutter-loaders needed for these seams were not available, though they were expected in the course of the current year.

There is not enough mechanization of preparatory workings, and of 284 preparatory drifts only in 39 has coal-and rock-loading been mechanized, though there are dozens of machines available in the store. The other tunnels have still to rely on manual loading. Eleven mines, including Nos 1 (b), 6, 20(b), 56/62 and a number of others, have not done their part in the way of preparatory tunnelling -- and one sees that some of these same mines are also lagging behind with their output of coal. Mechanized tunnelling is to be speeded up by the better use of rock-loading machines already available in the drifts.

The introduction of the remote control system and the simplification of the transport and ventilation systems would lead to a considerable reduction in the number of workers employed underground.

Further Expansion and Improvement

Looking back over the first eight months of 1953 and the year 1952, it seems that the Karagandaugol Combine managed to produce and even to exceed the quotas of production set for it as a whole, despite the defaulting of many individual mines and open-cast workings and the failure of the Kirovugol Trust to deliver many thousands of tons this year. The head of the Combine, P.P. Inozemtsev, has pointed out in a recent article (in No. 8, p. 9 of the magazine Ugol. 1953) that it is quite possible to fulfil the task set for the Combine under the Fifth Five-Year Plan of 1951-55, but that this will call for a great effort from all the personnel of the mines.

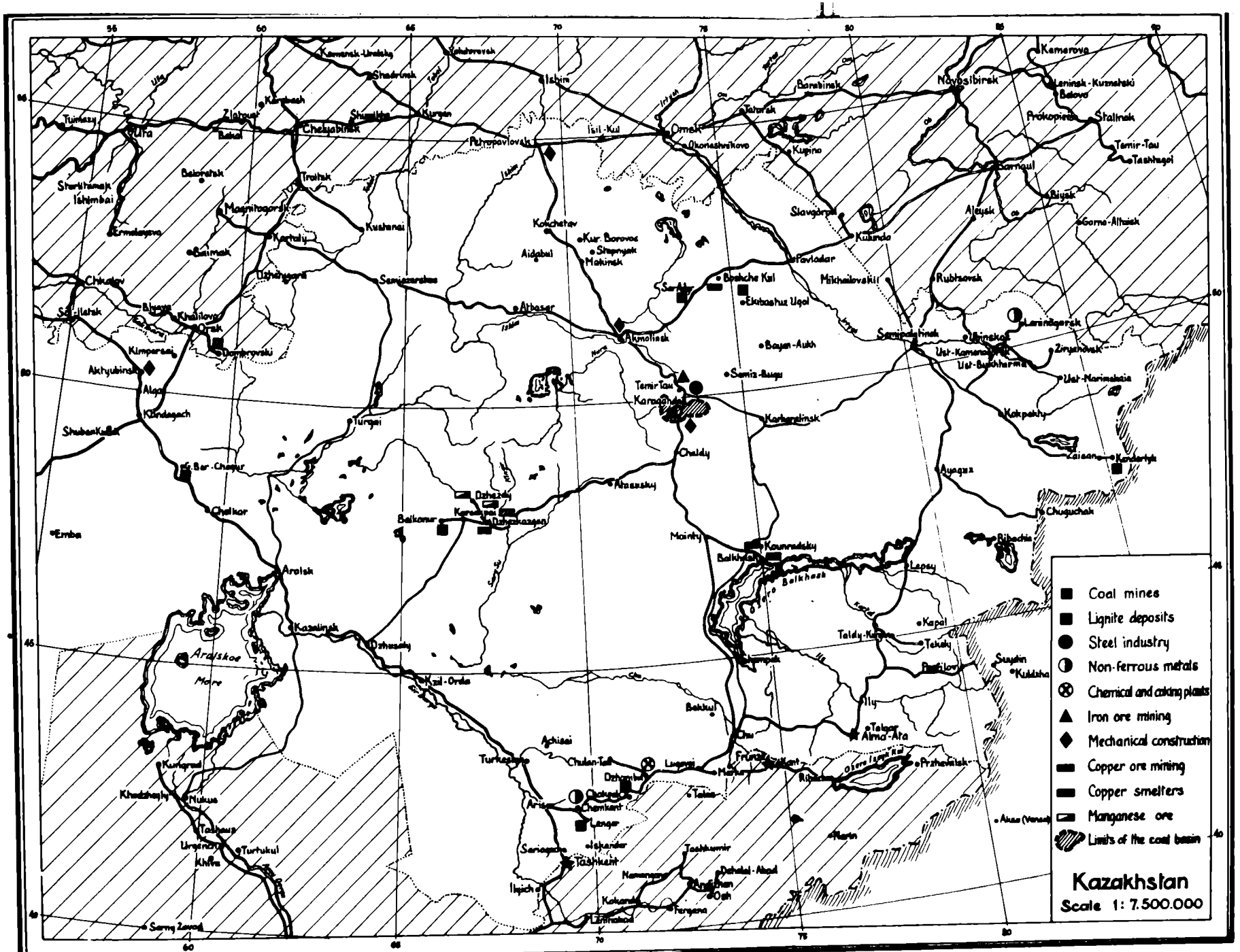
As stated earlier in this article, the plan envisages an increase of output by 61 per cent between 1951 and 1955. Any big new increases in output, however will depend on the sinking of new pits and the reconstruction of the older ones so that they can be fully exploited. About seventy-five per cent of the increased output is to come from new mines, and if the target is to be achieved a definite improvement in the building and sinking of pits is necessary. At present pits are brought into operation after considerable delays and often without being fully completed. In addition there should be some effort to keep to schedules for the establishment of coal concentration and other industrial plant.

Municipal Expansion

Side by side with the opening up of the coalfields there has been development in other directions. The city of Karaganda, heart of the mining area, has grown very fast. Its present population of about a quarter of a million compares with a figure of 166,000 in 1939. In its 101 schools over 50,000 children are being educated, while the teachers' training college, medical institute, technical schools of mining and industry, teachers' training school, and nursing and midwifery school have an enrolment of over 3000. Two new secondary schools to take 1400 pupils in all were under construction last summer.

An ambitious building programme has been undertaken since the war to meet the needs of the growing population. Since 1945 there have been built 16 secondary schools, one music school, 21 kindergartens and day nurseries, 11 hospitals and dispensaries, 45 refectories and bakeries, six clubs, two pioneers' (boy scout) camps and a summer theatre. Buildings completed in the last three years include 200,000 square metres of housing accommodation, two cinemas and three clubs. The current year's programme involves the completion of 87,000 square metres of flats, six hospitals and dispensaries, two schools, four clubs and other municipal buildings in the new town. By 1955 another half-million square metres of housing should be completed as well as a central post office, meat canneries, breweries, confectionery and clothing works.

Building operations seem, however, to be lagging behind schedules, although adequate cadres of technicians and labour are available and two organisations concerned with building the Karagandashakhtstroi and the Karagandaugol Combines -- are well supplied with modern building machinery. The hospital of the Fedorovka settlement, still under construction by the Karagandauglerazrezy Trust, ought to have been opened in 1951; and a number of buildings which should have been completed in 1952, including a club, a school, seven hospitals and dispensaries, three kindergartens, a day nursery, four shops and


Coal mines
Lignite deposits
Steel industry
Non-ferrous metals
Chemical and coking plants
Iron ore mining
Mechanical construction
Copper ore mining
Copper smelters
Manganese ore
Limits of the coal basin
Kazakhstan
Scale 1: 7.500.000

two public baths, were still incomplete last summer.

In certain respects building work is not of a high quality. Mechanization in the undertakings of the Karagandapromzhilstroi has been carried out only to the extent of 13.7 per cent of its concrete casting and transportation, and to the extent of 30 per cent of its plastering work. The quality of much of the painting work done is low. The Central heating installation in a Fedorovka school had to be dismantled and reinstalled. Many electric mains are not laid properly. In a house of 18 flats floors were laid with unplaned boards. Walls of new houses often sweat and in some places smoke fills the rooms when the heating is used.

It is nevertheless reported that new houses and flats are going up at an increasing rate in Karaganda and its suburbs. A new railway station, several government offices and cinemas are being built. Besides the local Palace of Culture, 35 clubs have been built.

Parks and gardens have been laid out in the town while trees are being planted along the streets and in the squares of Karaganda. Parks are being enlarged and a new zone of afforestation is being created along the railway that links mines No. 101, 104, 105 and 106 in which half a million trees and bushes will be planted.

The big coal industry has acted as a stimulus to other enterprises and these include the Parkhomenko Coal Machinery Plant, a railway engineering works, repair shops for mining and agricultural machinery, flour mills, breweries and a motor repair shop.

Sources.

1. "Ugol" No. 8 pp 7-9.

2. "Master Uglya" Nos 8 & 7, pp 3-4; 17-18 resp.

3. "Mehkhanizatsia" 1953 No. 8 pp 9-11.

4. "Mehkhanizatsia" 1953 No. 7 pp 23-25.

5. "Kazakhstanskya Pravda" 1953 January-September.

LAKE BALKHASH AND ITS INDUSTRIES

Copper deposits located during the period of the first Soviet Five Year Plan have been the main factor in effecting a great change in the economy and indeed the whole life of the inhospitable and until lately undeveloped country around Lake Balkhash. In the past two decades Kazakhstan has become the chief source of copper of the Soviet Union and it is claimed that its output entitles it to third place among world producers of the metal after Northern Rhodesia and Chile; moreover, as the mining and processing of the important ore has proceeded at an increasing pace, towns have grown, rail and water communications have been extended and new industries have made their appearance. The possibilities of greater food production have been studied and finally social services are said to have developed on the pattern that is to be found in the more advanced republics of the U.S.S.R. Reports have been published of industrial stoppages and of production targets not reached, but it is still claimed that from relatively poor ores supplies of metal have been obtained at a very low cost and that the stage of expansion is not over.

Lake Balkhash lies at the centre of Kazakhstan at an altitude of 340 metres above sea level and between the forty fifth and the forty seventh parallels and the seventy third and seventy ninth meridians east of Greenwich. It is 605 kilometres long, its width varies from 8.5 to 74 kilometres and it covers an area of 17,660 square kilometres. The Uzun-Aral Straits divide the long narrow stretch of water into two parts, of which the western part is relatively shallow and wide and has its shores broken by many inlets and bays, while the eastern part is narrower and deeper and has a less indented coast line. Further, the western part of the lake has relatively fresh water as it is replenished by the flow from the Ili River, whereas the other part is brackish, the more so because of the high rate of evaporation in an area with very little rainfall. Much of the country around the lake is desert with less than eight inches of rain a year, and of the many rivers that flow through the region few have enough water to flow very far. In fact over an area considerably greater than the whole of Canada there is no drainage to the ocean. To the south of Lake Balkhash is the Semirechye Steppe and the fertile valley of the Ili River which enters Kazakhstan from Sinkiang. North of the lake is the high region of the Kazakh Uplands and it is in this area that the major industrial developments of recent years have taken place.

Copper Mining

The mining of copper ores takes place in two areas -- at Kounrad, 18 kilometres north of the lake itself, and also at Dzhezkazgan several hundred kilometres to the north-west which has been linked to

the main Trans-Kazakhstan Railway Line by a branch line. The latter has the bigger reserves of copper -- about 30 per cent of all the known reserves of the Soviet Union -- and it is claimed that when the processing plant now under construction for the Dzhezkazgan Mining-Metallurgical Combine is in full production, the locality will be the "Magnitogorsk of Non-Ferrous Metallurgy" with a yield of copper exceeding that of all the Ural smelters combined. The field is said to be second only to the Cukvikamita deposits in Chile. For the present, however, Kounrad has the advantage of being nearer to the processing town of Balkhash and, thanks to a considerable degree of mechanization, is able from ore of a poor quality to turn out copper at an exceptionally low cost.

At Kounrad mining began in 1938 and the same year saw the Balkhash copper smelting plant yield its first copper. The rock is loaded by excavators, after blasting, into special 100-ton gondolas, as the railway wagons are known, and trainloads of ore are drawn by electric locomotives to the concentration plant of the Balkhash Copper Combine at Bertys Bay, near to the town of Balkhash, which has at present the republic's biggest smelting plant and produces most of its copper.

Processing

These smelters handle the ores from Kounrad and share with the Karsakpai smelters the processing of the Dzhezkazgan ores. Here again all processes have been mechanized. Conveyors take the ore to crushers which reduce it to pebble sized chunks to be sent on to the ball-mills. A suspension of crushed ore in water is pumped to the flotation division where the waste rock is removed. The daily tonnage of smelted material runs into four figures and one can see great bridge cranes carrying massive loads of crude copper to convertors where it is purified of sulphur and iron by means of compressed air and fluxes. The furnaces are automatically regulated.

The output of the Balkhash smelting plant for 1952 was 30 per cent greater than the 1950 figure, which in its turn was three times the output for 1940. It is expected that the 1953 production of raw copper will show a further rise of 15 per cent. The production plan for 1951-55 aims at doubling the Union's copper output (i.e., approximately from 288,000 tons to 540,000 tons) and the smelters of Kazakhstan are expected to supply half this total.

Doubts have been expressed how far the present production situation justifies the forecast so optimistically made by the planners. A newspaper article published in June + suggests

+ "Kazakhstanskaya Pravda" June 12, 1953

that at the Balkhash Copper Combine plant the output of copper has been lagging behind schedules set for the fifth Five-Year Plan (1950-55), and there is an appeal to the management of the combine and to local party officials to mobilize the workers in an effort to reduce the arrears and to make the most of the potential at their disposal. There is a reference to the mutual recriminations between the various parties involved -- the management of the smelting plant, the Dzhezgazgan Combine and the officials of the Party and the local trade unions -- and each side receives its share of criticism.

The article points out that for three years the Balkhash Copper Combine has not turned out its expected quota of crude copper. The director of the Combine and local Communist party officials are quoted as blaming the Dzhezgazgan concern for failing to deliver sufficient ore. To some extent that is said to be true, but often, with a full supply of ore, the copper output remained low. A major share of the blame is apportioned to the management at Balkhash for unsatisfactory operation of equipment and for waste in production processes, as well as to the party and union officials for the lack of interest of the workers.

Unsatisfactory handling of equipment often results in machinery being kept idle. In 1952 alone on over 500 occasions the operation of machine complexes had to be suspended in the ore-crushing divisions at Balkhash. In hundreds of cases machinery was idle for long periods at a stretch. In the ore-crushing shops accidents involving breakages of machinery were often reported. And during the first five months of 1953 total suspensions of work at Balkhash amounted to about 1,800 machine-hours.

There were considerable production losses which no steps were ever taken to curtail. In the first five months of this year about 200 tons of copper were lost in the ore flotation process; the route from the concentration plant to the metallurgical workshops was covered with a thick layer of copper concentrate; while large quantities of this concentrate were wasted in the open air stores.

While the Balkhash plant complained of the irregular delivery of ore from Dzhezkazgan, they themselves were blamed for frequently cancelling the despatch of trainloads of ore from the Kounrad mines. In May 1953 alone about 100 trains were delayed at the mines and thousands of machine-hours were lost

What is also significant is the complaint made by the writer of the article of the flagging interest of the workers at Balkhash in their task. Only one fifth of the workers in the combine were taking part in "Socialist emulation drives". In the early days nine Balkhash workers were awarded the Stalin prize and over a thousand

have been decorated with various Soviet orders and medals. Last June, however, the number of Stakhanovite workers was said to be falling and the number failing to reach their production targets was double the 1952 figure.

Other Industries

Other modern enterprises have made their appearance in Kazakhstan, many of them as a result of the copper mining and smelting ventures. At Kounrad a certain amount of molybdenum is mined. New industries at Balkhash include a rolling mill for non-ferrous metals, an engineering works, a building materials combine and fish canneries, all of which have come into being since 1938.

Communications have developed to meet the needs of Kazakhstan's new economy. The Trans-Kazakhstan line extends for 1200 kilometres from Petropavlovsk to Balkhash via Karaganda and was only completed in 1935. More recently a branch line has been completed to link Dzhezkazgan, Baikonur and Dzhezdy with this line and so bring the ores of the first named city to the smelting plant at Balkhash. Another new line, the 438-kilometre Mointy-Chu line, links the Turkestan-Siberia railway (the Turksib) with the Trans-Kazakhstan line and thus connects the capital of the republic, Alma Ata, with its main industrial towns. The rail journey from Alma Ata to Balkhash has thus been reduced by more than 2,000 kilometres.

Lake Balkhash itself has been used as a commercial waterway only since 1931. The tonnage handled increases every year. There is a regular boat service between Balkhash and Bertys and the possibilities of services in the southern region of the lake to meet the needs of a growing population and economic developments are being studied.

Agriculture

More industries and the prospect of increased settlement in the area mean that more food will have to be produced. In the area immediately around Balkhash a number of dairy and vegetable farms have been started, but the republic needs to have its own supplies of food and raw materials, and the Kazakh Academy of Sciences is trying to turn the wilderness south of the lake into a big food-producing tract. There is much land suitable for agriculture and raising livestock where so far only nomadic shepherds have roamed with their flocks. The use of the waters of the Ili River for irrigating hundreds of thousands of hectares of land as well as for generating power is envisaged. So far small areas have been sown with trial crops and

the results have been reported as satisfactory, though it is recognised that areas for sowing will have to be carefully selected and poor soil will need improvement. In the past three years over 300,000 young trees and bushes have been supplied to kolkhozes for planting. Experimental work on 775 hectares put under vegetable crops show a possible average yield of 16 tons of potatoes, 45 tons of cabbages, 59 tons of tomatoes, 10 tons of onions and 42 tons of water melons per hectare.

Welfare and Cultural Activities

The town of Balkhash has sprung up since 1936 and its past and future development has had much attention from the planners. The press reports that in the past four years 50,000 square metres of housing accommodation have been provided for the population, the figure for 1952 alone being 22,000 square metres (104 flats and houses). Large modern blocks are going up, and the new flats have electricity, central heating and other amenities. A new central town square is planned, new tree-lined avenues are being constructed and a green belt is to be created round the city. A 50-hectare plot near the lake will be laid out as a park of culture and rest.

Already the town has over 30 schools, five clubs, ten libraries, several hospitals, dispensaries, nurseries, cinemas and a technical school of mining and metallurgy. A thermal power station supplies electricity to the town as well as to the smelting works and the Kounrad mines. A central bakery and 55 shops supply the domestic needs of the people.

For their entertainment the workers at the copper-smelting plant have a "Palace of Culture" built in 1952 which provides a cinema, sports facilities, a library and study rooms. Another club is being provided for the Kounrad miners.

Sources:

1. S.A. Kutafyev "Kazakhskaya S.S.R." Moscow, 1953 p. 93.

2. "Bolshaya Sovietskaya Encyclopaedia" (Balkhash).

3. "Sovietski Soyuz" 1953, July, pp. 12-15.

4. "Kazakhstanskya Pravda" 1953 (January-August.).

HARNESSING THE IRTYSH RIVER

The Ust-Kamenogorsk Hydro-Electric Station and the Development of East Kazakhstan

The Irtysh and its Basin

The Ob-Irtysh river system, 3,200 miles long, is commonly listed as the world's fourth, after the Mississippi-Missouri, the Nile and the Amazon. The two rivers Ob and Irtysh, which come together for the last 700 miles of their northward course from the Mongolian Altai to the Kara Sea, have historically provided the main north-south transport route of Western Siberia. In their middle and lower reaches they flow slowly over the immense level of the Siberian Plain. But in the uplands of Eastern Kazakhstan, through which the Irtysh travels before its confluence with the Ob, glacier-fed rivers coming down through precipitous mountain-gorges are suitable for hydro-electric projects. Above Ust-Kamenogorsk, capital city of the East Kazakhstan oblast, the Irtysh has a fall of 104 metres in its 400-kilometre passage from Lake Zaisan. It is just above Ust-Kamenogorsk, at Ablaketka, ten miles upstream, that the Irtysh Dam has been constructed, to provide for hydro-electric power, irrigation, and an improved level for navigation over the stretch between Lake Zaisan and the dam.

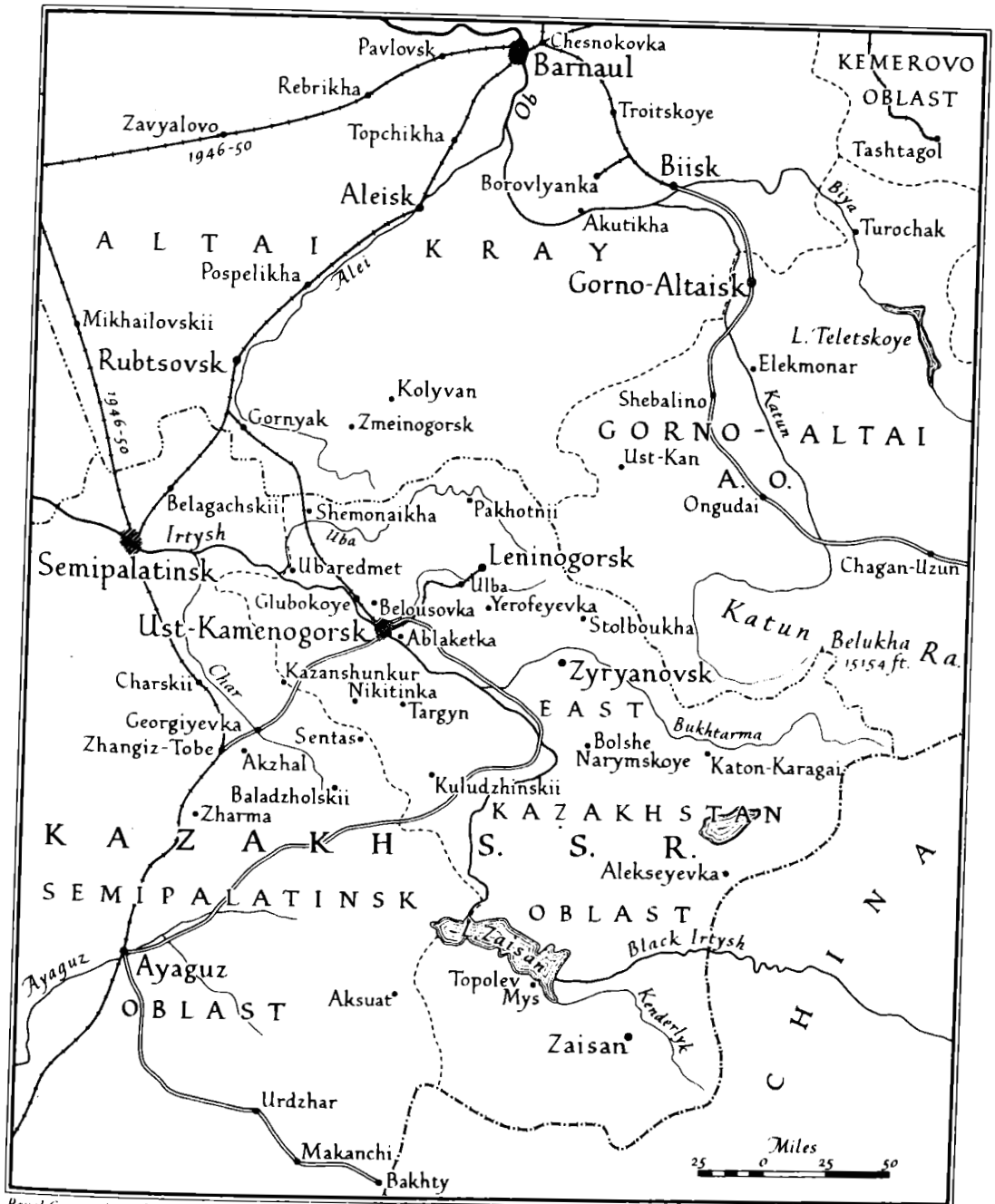
This Kazakh portion of the Irtysh basin extends for 2,500 kilometres: from the frontier with China, where the Black Irtysh (as it is called above Lake Zaisan) enters the Soviet Union after flowing eastwards for nearly 600 kilometres through Chinese territory. Lake Zaisan is a large body of water 111 km. long and 30 km. wide - larger than Lake Sevan in Armenia. It abounds in fish and is not stagnant, since the waters flowing in from the Black Irtysh have a free outlet through the Irtysh proper to the Ob and the northern seas, so that the lake is drained as the Neva drains Lake Ladoga.

The Irtysh with its tributaries is the only river of the Kazakh SSR which does not drain into an inland basin. The Eastern portion of the Kazakh Republic through which it flows is to some extent favoured by the natural factors which have distributed population so irregularly over the great area of the Republic - the second largest in the Union - from the Caspian Sea to China. The population density of the East Kazakhstan oblast is thus more than twice the average over the Kazakh Republic as a whole. Its chief importance today derives from the mining and metallurgical industries which tap the rich and various resources of ores in this part of the Altai where the uplands meet the steppe. Ust-Kamenogorsk, the capital, at the confluence of the Irtysh with its tributary the Ulba, is a

centre of zinc-smelting, with metalworks, tanneries and other factories under development and a belt of new workers' settlements outside the town. It has a central airport, an expanded river-port, and rail-communication on the right bank with Leninogorsk, now one of the foremost lead and zinc producers of the USSR. Lower down the river lies Semipalatinsk, capital of the oblast of that name, a transportation hub at the junction of the Irtysh and the Turksib Railway, with railway-shops, a large meat-packing plant and other industries serving or processing the agricultural production of the region.

The economic development of Eastern Kazakhstan was vitally stimulated as a by-product of the construction of the Turksib Railway (1927-30) and the branch-lines penetrating the ore-bearing Altai. River-transport, however, remains important, here as elsewhere in the USSR, despite its seasonal character. Even above Lake Zaisan the Irtysh has been in some sort of use as a shipping route since 1863, though only in 1901 was a company formed at Semipalatinsk to carry passengers and cargo. It is not only winter-ice which has restricted navigation on the Irtysh. Between Ust-Kamenogorsk and Lake Zaisan, and above the Lake on the Black Irtysh the watercourse, though navigable and used as such, was hitherto dangerously beset with shoals, rocks and rapids, and particularly treacherous at a low-water level. Although Lake Zaisan is a natural reservoir, its value has depended on the inflow and behaviour of the Black Irtysh; its banks are low with shallow approaches, and it reaches its lowest level at the beginning of April, three weeks before the opening of the navigation season.

A picture of the Upper Irtysh and its navigation was given in the late nineteen-forties by Vsevolod Ivanov, a writer native to Ust-Kamenogorsk, who described his journey upstream from Semipalatinsk in the passenger and cargo steamer Lobkov. From day to day he watched the wild stretches of steppe bordering the river between Semipalatinsk and Ust-Kamenogorsk, the flat islands which had to be skilfully avoided in negotiating the channel, and the rolling green hills stretching to the distant horizon. After passing Ust-Kamenogorsk the panorama changes, the river cutting its way between walls of rock, beyond which at times the writer caught glimpses of imposing mountains. At length the high country receded again from the river, and nearer Lake Zaisan the steppeland predominated once more - with this difference from the grazing-lands of the Semipalatinsk steppe that over the left bank an orange haze indicated the presence of the dry desert soil. Game was plentiful and the engineer of the Lobkov would shoot duck from the bridge, with a setter beside him to retrieve the birds from the water. Such diversions, however, were brief, since a rival vessel was on the same course and an official competition drive was in progress.



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ALTAI REGION

The placid character of the Upper Irtysh will be changed by the control of the water and the improvement of the river-level above the Ust-Kamenogorsk project. Not only will the amount of freight that can be carried be increased, but also its speed of transit to the mining-centres and the metal-works, the kolkhozes of Eastern Kazakhstan, and to the Lake Zaisan area itself - a region hitherto remote and tranquil with little settlement, but offering (it is hinted) possibilities of development.

The Irtysh and its right tributaries, which also rise in the Altai, are more useful for irrigation than the rivers of the steppe-lands further west, and reach their maximum level at the best season (July-August) from the agricultural point of view. Control by the new dam is intended to leave a part of the water available for irrigation.

Hydro-electric Power: an All-Union Achievement

The main significance of the project, however, is in the provision of hydro-electric power. Eastern Kazakhstan got its first power-station at Leninogorsk in 1926, and a number of smaller power-units have since been constructed on the mountain-rivers; but these have together been inadequate for the increasing industrial requirements of the area. It has recently been emphasised that without the establishment of a large-scale generating base the orderly development of mining in this naturally rich district could not proceed. With it, a higher output of lead, zinc, copper, tin and also of precious ores will be possible: a fourfold increase is estimated in the production of non-ferrous metals. The expectation at full capacity from the Ust-Kamenogorsk scheme is put at two-and-a-half times the previous power-resources of Eastern Kazakhstan, with great advantage to the metallurgical industries, improvements in the technology of ore-extraction and smelting, and expansion of electrolytic processes in the lead-works. New industries, both heavy and light, are at the initial planning stage, including plants for superphosphate fertilisers, cement and building materials, and an increased use of power for meat, fish and other food industries, for cold-storage space and for powdered milk factories. The possibility of electrifying difficult traction sections of the Turksib Railway branch-lines is not excluded. Any surplus energy would be made available for parts of Western Siberia and the Altai Krai, and plans are reported envisaging a grid-system linking Ust-Kamenogorsk hydro-power with the thermo-power stations of the Kuzbas and the Altai.

The spreading of the benefits of the project beyond East Kazakhstan to these neighbouring regions was hailed in the speeches made on July 3, when the work was sufficiently advanced for the

ceremonial opening of the power-station and lock-system before a gathering of technicians, engineers and other workers. The customary slogans were broadcast, and there were reminders of Lenin's definition of Communism as soviet power plus the total electrification of the Union. Emphasis was laid on the "united efforts" of the peoples of the Soviet Union required to bring such schemes to fruition, and it is evident that the work at Ust-Kamenogorsk has from the very beginning been regarded as a complex all-Union job. Not only specialized and technical services, but manpower in general was widely recruited, and it has constantly been repeated that the subjugation of the Irtysh is a Union triumph which could never have been put through on a Republic basis - even on that of the second largest Republic. Russians, Ukrainians, Uzbeks, Kirgiz, Kazakhs and Georgians are mentioned as uniting to solve the manpower problem: that is, workers mostly from adjacent Union Republics or from Russia proper. There is no reference to technicians from the former Baltic States or any of the satellites.

In supplies and materials the same universal note is struck. Neither bulk supplies nor some of the "unique" equipment and technical material could have been provided from Kazakhstan alone. A supply pool was required covering about 400 industrial enterprises. Metal for constructional frames and much of the machinery used on the site came from Leningrad, Kashira (Central industrial region) and Lopasnya, hydro-turbines from the Leningrad Stalin Workshops and electric generators from Leningrad Elektrosila. The control-panel for the lock was provided by the Moscow Dynamo-factory, and other electrical equipment and cranes came from Alma-Ata, Kharkov, Novosibirsk and other widely scattered centres. The overhead bridge cranes, described as "unique", were from Kramatorsk in the Eastern Ukraine; the rear dump trucks, used for moving earth, from the Belorussian capital Minsk; the "motovozi" (gasoline locomotives) from Kaluga, south of Moscow; and the steam locomotives used in the construction yards from Murom, east of Moscow in the central industrial region of Russia. The Uzbek SSR contributed pylons for high-tension transmission from Tashkent, and other sources for vital items were Omsk, Saratov, Gorki, Kuibyshev, Sverdlovsk and the former Baltic States. Surprisingly, cement was brought all the way from Kuznetsk in the middle Volga region, and timber even from the Far East.

The construction of the Ust-Kamenogorsk power-station began before the Second World War, on a design similar to that of the Dnieproges, first of the large Soviet power-stations, built on the Dniepr in 1932. Work was interrupted during the war and afterwards resumed. In 1948-50, when Vsevolod Ivanov was describing his travels on the Irtysh River, the blasting of the lock-bed was

in progress but still far from completion. The semi-mountainous character of this part of the river's course, and the whole nature of the district made the site of the new plant, he wrote, an ideal one, since Ablaketka , ten miles above Ust-Kamenogorsk, is in the centre of the Altai orefield, which requires a great provision of power for its full exploitation.

Subduing the River

The Irtysh had been only partly subdued when Vsevolod Ivanov visited the site. The protective rampart for the construction of the dam then extended about half-way across the river. He described the rampart as an uncompleted wall of ice and gravel on which the river-current beat with a pressure of one hundred thousand tons. Freezing had been applied because the rock-foundation of the river-bed could only be reached through a fifteen-metre layer of sand and gravel which was useless as a base. It was on the advice of specialists called in from the Moscow Metro, where a similar constructional problem had been solved by freezing, that this device was employed. Four hundred bores were drilled on their instructions to a depth of 30 metres each, and freezing substances pumped down through a system of pipes. This effectively solidified the gravel, making it possible to build on this foundation a higher rampart and eventually to create a basin from which water could be pumped. Under the protection of the temporary rampart the iron girders and concrete blocks could then be lowered to the solid rock of the river-bed for the erection of the dam. There were crevices in the rock, however, which had first to be filled with cement poured in through hundreds of bore-holes.

By these methods both the dyke or rampart and the dam itself were built in two parts, starting from the left bank of the Irtysh. When the concrete dam was completed up to the middle of the river, a pontoon-bridge was thrown across. Tip-lorries loaded with crushed stone followed each other in a continuous line along the pontoon and dropped their load into the river, so that a new dyke was formed. Then the first dyke, no longer required, was blown up and the Irtysh waters rushed through the apertures at the bottom of the dam and began to flow along their new concrete bed. After this the right half of the river-bed was shut off and the second portion of the dam was built, followed by the hydro-electric station and the lock. No other approach to the task would have been feasible, since the course of the river is through a mountain-gorge and there was nowhere to which the waters could have been temporarily drained during the construction of the dam.

On July 18 reporters wrote enthusiastically that the blaze of lights at night could be seen far away from the Ablaketka dam.

The generators had then been at work for a few days only, and the plant was described as working faultlessly and without intermission.

Ablaketka

Ablaketka itself, the settlement near the site chosen for the dam some 10 miles up-stream from Ust-Kamenogorsk, has not so far been given the status of a municipality, and when this happens some name of Soviet significance may well be substituted for the present one, deriving from Ablai, a Dzhungarian Khan now held in disrepute. As a workers' settlement it is of mushroom growth, as can be seen from the high hill rising away from the river behind it. The concrete production plant, entirely automatic, spreads over a considerable length of the river front, followed by the mechanical repair workshops, the rock-crushing plant, the car-repair workshops, the sprawling garage-sheds and the lumber-yards and saw-mills. The builders of the power-plant, and from now on its maintenance staff, live on both banks of the river. The lay-out and primary construction work which brought the new Ablaketka into being were carried out by unskilled women's labour in the first year of the war. Now the place is publicised - as are several other cities in the former Russian Turkestan, - as a "city of youth." Young people, including 3,000 Komsomol members, make up about 70% of Ablaketka's present population. There are some 2,000 children in school, and many youths and girls attend the FZO (Factory and Workshop Schools).

There are said to be over a thousand two-storey houses in Ablaketka, and its 100-bed hospital is considered the best in Eastern Kazakhstan - even better than that at Ust-Kamenogorsk. Shortcomings are reported, however, and attributed to the rapid expansion of the settlement. The health-establishment is ten short of its planned complement of 32 doctors, and the hospital has no X-ray specialists, though it has equipment. Cash allowances for medicines for the sick are stated in Press reports to be only 2.30 roubles a day, as against 5 roubles provided in Zyryanovsk and Leninogorsk. The roads have been criticised as in a shocking condition, though that to Ust-Kamenogorsk was to be asphalted and five kilometres of new roads laid within the settlement. Long overdue work on the sewage-system was only now to be started in earnest. How the importance of Ablaketka will be affected by the removal of some of the workers to other projects such as that at Bukhtarma remains to be seen when the final touches have been given to the Ust-Kamenogorsk scheme.

Navigation

At some point on the Bukhtarma tributary which joins the Irtysh nearly fifty miles above Ablaketka, another power-station will be built. One result of a high dam in this area will be a rise in the level of the Zaisan Lake, and the two projects together will render the whole of the Upper Irtysh from Semipalatinsk to Lake Zaisan navigable by large ships. Already the Ust-Kamenogorsk dam with its single-chamber lock is having repercussions in the improvement of navigation.

The unusual feature of this lock is reported to be the huge single chamber, the only single-chamber lock of that dimension in the entire Soviet Union, with walls towering to a height which current Press references have so far only vaguely estimated as that of a fifteen-storey house. The special design of this piece of engineering was adapted to the existence of natural obstacles in the gorge, but it is also considered to have advantages over a lock-system of many chambers in the speeding up of the passage of ships.

On May 31 the lock-system was reported to have been nearly completed, though the gates at the lower end of the lock weighing 400 tons still had to be lowered into position. The great weight of these gates is often referred to, and it is sometimes indicated in the figure of 24,000 puds rather than 400 tons - the pud being an old Russian weight and liable to impress the imagination of any old-timer when quoted in this quantity. On that date, May 31, tugs and barges were already awaiting permission to approach the lock, but it seems that the first steamer, the well-known Lobkov, entered only on July 3. This steamer, it so happens, was familiar to Russian readers as that on which the author Vsevolod Ivanov, whose description of the river passage has already been referred to, had travelled up from Semipalatinsk to the Zaisan Lake at a time when the lock was still being blasted. The dam being then only half-way across the river, progress upstream was almost impossible without the help of powerful tugs or traction-ropes. By July 8, twenty steamers had been passed through the lock in both directions, and the lock-supervisor was devising time-saving methods to accelerate the passage.

A factor which is now likely to expedite considerably the turnabout of steamers is the stretch of 80 to 100 kilometres of placid waters formed above the dam. The dreaded stretch between Ust-Kamenogorsk and Gusinaya beyond Ust-Bukhtarma is now tamed. The new lake above the dam has submerged the most dangerous - among them the formidable obstacle known as The Seven Brothers - and made the passage safe and easy. Last year the most powerful tugs were

still towing only one barge at a time on this stretch of the Irtysh, whereas now with the current regulated they can easily handle two: thus the volume of freight transported would be increased even if the number of tugs remained the same.

Navigation opens in April, and the season this year had an earlier start than usual. At Altaiskaya (Ed. Possibly Chesnokovka on the Ob) the arrival of the launch Henri Barbusse was reported on April 19. On the Irtysh the first tugs had arrived on April 24 at Pavlodar, where the South Siberian-Railway crosses the river 230 miles below Semipalatinsk, from which the steamer Abai was reported as the first to move downstream. Following experience gained on many Russian rivers, the new method of pushing barges instead of towing them is being introduced on the Irtysh and is acclaimed as an indication of progress. Between Pavlodar and Semipalatinsk barges of greater tonnage and load were being moved on the new principle ahead of time-schedules and with considerable economies in fuel and lubricants. The steamer Budennyi, it was reported, had covered the 478 kilometres stretch between Pavlodar and Semipalatinsk $19\frac{1}{2}$ hours ahead of time, and on a second trial gained 22 hours 18 minutes on her schedule. Her average "technical" speed was 7.5 km. per hour, while with the old towing method a more powerful tug could not exceed 6.25 km. per hour.

Port facilities on the Pavlodar-Semipalatinsk-Ust-Kamenogorsk stretch have now been almost fully mechanised. Even at the smaller piers mechanical means of handling cargoes such as conveyors up to 500 metres long have been installed. There have also been improvements in facilities for repairing steamers and barges. At the Trushnikovsky repair-shops the steamers Voroshilov, Bessarabia and Kolyma were repaired this spring ten days ahead of schedule. The Pavlodar workshop overhauled the powerful steamer Frunze on time, and the Semipalatinsk wharfs handled about 50 steamers and barges. This is taken as a good indication of the capacity of the river workshops at this big transport centre.

Ust-Kamenogorsk

Among the cities of the East Kazakhstan Oblast most immediately affected by the new source of power, Ust-Kamenogorsk itself is old by Siberian and Kazakh standards. It was established, that is to say, around 1720 as a fortress, in the course of an expedition up the Irtysh despatched by Peter the Great under Likharev in search of gold and of the river Syr-Darya. Likharev, with 440 men and artillery in 34 boats, scattered the Dzhungarians in an encounter on the Black Irtysh above Lake Zaisan, but for some reason returned to the point of confluence of the Ulba with the Irtysh, where the strongpoint

that he set up, later renamed Ust-Kamenogorsk, became an important defence link on Imperial Russia's extreme south-eastern frontiers. Parts of the old fortifications remain today.

At the beginning of the present century Ust-Kamenogorsk had a population of 8,500 - of which 95%, say Soviet sources, were illiterate. It is added that the place had only two doctors, but a plentiful supply of taverns in the ratio of one to every 120 of the population. Vsevolod Ivanov, who has described his return to these parts, was born at Ust-Kamenogorsk and remembers it as a tiny provincial settlement, coming out of its hibernation only on the opening of the navigation season - there was of course no railway at that time. The largest building in his recollection housed a municipal school which had a limited three-year course. The town's industrial activities, he has written, were confined to two soap factories and six tanneries.

The Ust-Kamenogorsk of today has a zinc-smelting plant, metal works, mechanical workshops, timber-yards , tanneries and a vegetable-oil industry. The value of its industrial production is stated to have increased 15-fold since 1940. It is considered a progressive city and the undisputed cultural centre of the Rudni Altai, with 38 schools enrolling 10,000 pupils, and a teachers' institute, branches of several all-Union scientific bodies and a branch of the Kazakh Academy of Sciences. An institute of mining and metallurgy is planned to be opened in the near future.

There has been criticism of the supplies and facilities for the rapidly developed labour settlements in the suburbs. Even the "assortment minimum", it was complained, was not strictly adhered to in shops selling textiles and other similar articles. Other complaints related to stalls which ran out of salt or matches, or on a hot day could not provide cold drinks or ice-cream. Sugar and vegetable oils would sometimes be in abundant supply in one suburb while another ran short; or there would be an excess of shoes in large sizes in one store and in small sizes in another. Poor organisation rather than short provision was blamed for these defects, and an expansion in trading facilities has recently been recorded, with more shops opened and better and more varied merchandise on sale.

Leninogorsk

Leninogorsk (called Ridder until 1940) is the largest mining-centre of the region and will benefit considerably from the Ust-Kamenogorsk power-station. It lies some way up the Ulba which joins the Irtysh at Ust-Kamenogorsk. A rail-link also follows the course

of the Ulba. Leninogorsk was originally known chiefly for its silver-mines and was only later developed as a polymetallic orefield producing lead and zinc and also some gold and copper. The Leninogorsk "Kombinat" on the Ulba has its own hydro-electric station and is rated as a progressive industrial centre. This year, however, the Kombinat was sharply criticised for extravagant use of mining supplies (timber props, steel girders, reagents) and for slowness in introducing modern mining equipment which, though available, was utilised to only 50% of its capacity. Though ores were brought by electric traction underground to the bottom of the pit-shaft there were repeated delays in raising them to the surface. Out of 23 modern winches that had been installed, only 10 or 11 were in operation and those for only part of the day. The special drills required for boring were used up at the rate of 35-40 per double shift, but the central workshops of the Kombinat could provide only 10 or 12 daily. This led to stoppages. In 1952 alone a total of more than 10,000 cases of breaches of technological and mining rules were registered at the Kombinat, causing trivial and at times prolonged interruptions in production. Since July, however, more favourable reports have been coming through. Complex mining machinery and equipment, extensively introduced, now appears to be more productively used, and at the Sokolnyi mine the five-months output plan has been exceeded.

Despite criticisms of industrial shortcomings emphasis has been laid on the municipal progress of Leninogorsk, which has changed completely from the Ridder of pre-Revolutionary days "with its mud streets and clay-built houses." The surfacing of many miles of streets with asphalt, the planting of "green lungs" with trees - including the wild Altai apple and other decorative trees - have improved the amenities. A mechanised bakery, a sanatorium and large blocks of flats were being built and attention was paid to the previously neglected suburbs. With an expectation of further expansion, 17 million roubles have recently been assigned for the erection of a Palace of Culture.

These improvements were regarded as reflecting to some extent higher earning-power. At the Sokolny mine the earnings of a Stakhanovite were up to 6,207 roubles per month, a driller had collected in April a pay-packet of 4,826 roubles and a Stakhanovite drill-operator 5,869 roubles. It had been generally estimated that earnings had risen by 20% to 30% in comparison with 1952.

Zyryanovsk

Zyryanovsk, a smaller but important mining centre on the Bukhtarma River, will not only consume power from the Ust-Kamenogorsk source, but will itself be a supplier of power when the next hydro-electric project on the Bukhtarma is completed.

The modernization of the Zyryanovsk mining-industry, now culminating in the development of power, has not been an altogether straightforward process. There has in the past been an uncertain welcome to mechanisation, and in some cases even hostility. The assumption by visiting reporters that all "hard" jobs had been mechanized was not borne out by the facts, although such a crude implement as the shovel (lopata) was never mentioned in the enthusiastic technical conversation of local managers. At the Maslyanski mine, for instance, the lopata was still widely used, and talk of its abolition was not taken seriously. At the Zyryanovsk Kombinat the first-class machinery and equipment supplied was alleged to be either poorly used or not used at all. Superb machines were left to rust in the open, and the machinery already installed was used to only 40% of its capacity, drills and electric locomotives often remaining idle while the balance of work was still done by hand. For this state of affairs the "conservative ideas" of individual managers were blamed.

Reports of this nature from more than one centre of the East Kazakhstan ore-belt suggest that in the fuller development of the region there is more to be overcome than shortages of electric power. The publicity given to the Ust-Kamenogorsk project as a spectacular achievement on an all-Union basis may be partly intended to stimulate local determination to remove all other obstructions, including psychological ones, to the rapid material progress of the region.

Postscript

Since the above article was written further information has been published giving the location of the projected Buktarma dam as well as additional details about the so-called Great Irtysh Sea, that is to say, the enlargement of the existing Lake Zaisan. This information will be included in No. 4 of Central Asian Review.

List of Sources

It will be seen that only some of the articles in this issue are followed by a list of the sources used in their compilation.

Sources used for the remaining articles are as follows:-

CENTRAL ASIA AND THE RUSSIAN PEOPLE

Voprosy Istorii. 1951, 1952, 1953.
Srednyaya Aziya - Ilias Alkin. Moscow 1931.
Istoriya Kazakhskoi SSR, Kazogiz, Alma-Ata 1943.
Istoriya Tadzhikskogo Naroda - Gafurov, Moscow (1949 & 1952 editions).
Istoriya Narodov Uzbekistana. Tashkent 1947.
Central Asian daily newspapers.

MANPOWER IN INDUSTRY

Central Asian daily press for 1952-53.

COTTON-GINNING IN CENTRAL ASIA

Central Asian daily press for 1952-53.
Srednyaya Aziya - Ilias Alkin. Moscow 1931.

ELECTRIC POWER IN UZBEKISTAN and THE ANGREN COALFIELDS.

Pravda Vostoka. Jan-Sept 1953.

THE POSITION OF WOMEN

Pravda Vostoka. Jan-Sept 1953.
Kyzyl Uzbekistan. Jan-Sept 1953.
Pravda. 4th October, 1953.

CULTURAL DEVELOPMENTS IN TURKMENISTAN

Turkmenskaya Iskra. Jan-Sept 1953.
Turkmenistan - P. Skosyryev. Moscow 1948.

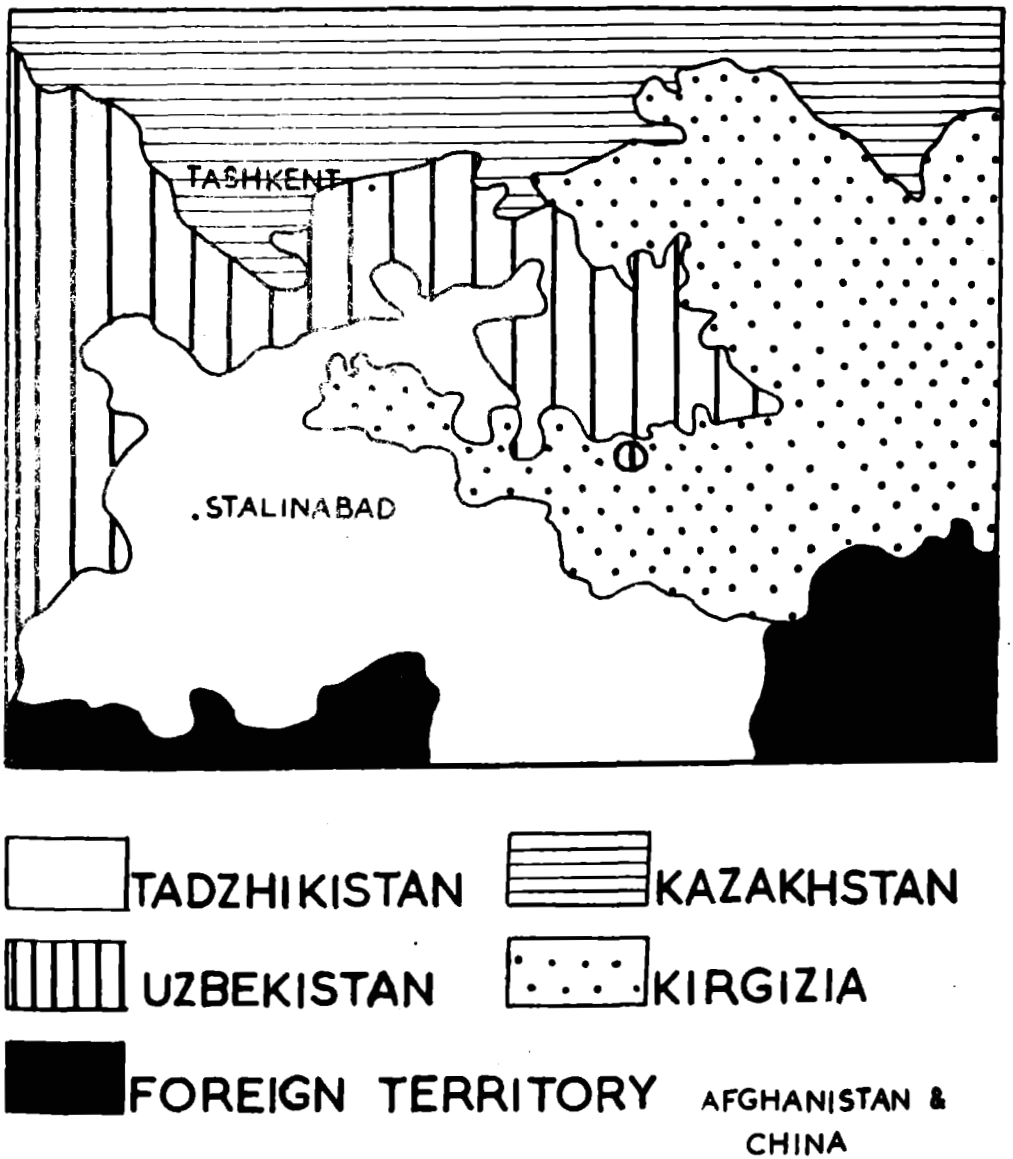
HARNESSING THE IRTYSH RIVER

Kazakhstanskaya Pravda. Jan-Sept. 1953.
Po Rodnym Mestam - Vsevolod Ivanov, Moscow 1952.

In future issues lists of sources will be appended to each article.

INTER-REPUBLICAN FRONTIERS

Sketch-map showing the inter-republican frontiers of Uzbekistan, Tadzhikistan and Kirgizia, and the interlacing of their territories in the neighbourhood of the Fergana Valley region.



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C E N T R A L A S I A N R E V I E W

The index consists of two parts:-

1. An index to articles arranged under special headings, namely, Agriculture; Communications; Cultural and Political subjects; Industry; Public Works and Services.

2. A general index of personal and geographical names, and subjects. In this index titles of all articles are given under the republic to which they refer.

Where several kolkhozes or raions have the same name, the exact location of each is given wherever possible.

No names of steamers or motor-vessels are included in the index; but there are general references under Steamers and Motor-vessels.

The small roman numbers refer to the issues of Central Asian Review.

The following abbreviations are used throughout:

Kaz. for Kazakhstan

Kirg. for Kirgizia

Tadzh. for Tadzhikistan

Turk. for Turkmenistan

Uzb. for Uzbekistan

A glossary of foreign words is given at the end of the index.

INDEX TO ARTICLES

Public Works and Services

GENERAL INDEX

GLOSSARY OF FOREIGN WORDS AND ABBREVIATIONS

Agrolesproekt	-	Trust responsible for afforestation
Aktiv	-	Active element in a Party organisation
Artel	-	Association of workers, organized group of workers
Aryk	-	Irrigation canal
Ashkhabadproekt	-	Ashkhabad planning office
Aul	-	Small administrative unit, a village
Bakhshi	-	Strolling minstrel
Barkhani	-	Shifting sands
Brigada	-	A group of workers engaged on a specific task, e.g. ploughing a field
Centner	-	1 cwt
Dekhan	-	Peasant
DOSAAF	-	Voluntary Association for co-operation with the Army, Air Force and Navy
Gidroproekt	-	Trust responsible for planning, scientific survey and research
Hectare	-	2.471 acres
Kishlak	-	Village
Kolkhoz	-	Collective farm
Kollektiv	-	Employees taken collectively
Kombinat	-	Industrial combine
M. Zh. S	-	Mechanized animal husbandry stations
M.T.S.	-	Machine tractor stations
Oblast	-	Administrative division of a republic

Raion	-	Division of an oblast, q.v.
Saksaul	-	Haloxylon ammodendron, a hardy desert perennial
Shturmovshchina	-	Rush tactics
Skopom	-	Working in gangs
Sovkhoz	-	Soviet state farm
Soyuzdorproekt	-	Road Construction Trust
Sredazgidrostroi	-	Lit. Central Asian Hydro-Construction, i.e. Trust concerned with building-works relating to inland water transport and hydro electric projects.
Sredazgidrovodkhlopok	-	Central Asian Cotton Irrigation Trust
Sredazneft	-	Central Asia Oil Trust
Sredazugol	-	Central Asian Coal Trust
Stakhanovite	-	Shock worker; follower of Stakhanov's methods in achieving maximum output
Turkmentekhsnabneft	-	Turkmenistan Technical Oil Equipment and Supply Trust
Turkmenvodstroi	-	Turkmenistan Irrigation and Construction Trust
Uzbekenergo	-	Uzbekistan Electric Power Trust
Vostokzagotzerno	-	Eastern Grain Supply Trust
Yurta	-	Felt tent
Zveno	-	Link; subdivision of a brigada

CENTRAL ASIAN REVIEW

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