the spring after a specific second crop has been harvested on the land? These and many similar questions need to be answered, but we repeat that we need a systematic approach but it is not possible to achieve this without the state's assistance.

Of course, the need to increase outputs and, consequently, incomes, will increase the number of farms getting second harvests.

The problem is in accelerating this process. To do so, as we have already mentioned above, we need a systematic approach and the state's attention and support. Local authorities should work in this direction. Only then will many Kyrgyz residents consider getting a second harvest from their land, as is traditional and normal for villagers in many countries of the world.

With a rapidly expanding population and a gradual reduction in arable land areas food provision will always be a significant issue that has to be solved. Mountains cover 92 % of the country's landmass and we have almost no virgin land so our chances of increasing arable areas are very limited and so second crops become a vital issue.

It is necessary to intensify the production and nobody argues against it.

At the same time when considering intensifying agricultural output we are often accustomed to emphasizing understandable and well-known things, such as capital investments, credits, seeds, fertilizers, irrigation, training, improved livestock breeding, veterinary services and so on.

We have no objections to any of these but organizational matters such as second crops should be considered.

If we can get farmers interested in the idea it would be a good start and help improve the republic's food security.

We hope the results of getting second harvests will always be of interest to growers.

THE ROLE AND PLACE OF THE RAILWAY SYSTEM IN THE INNOVATIVE INDUSTRIAL DEVELOPMENT OF THE NATIONAL ECONOMY

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For the economy of Kazakhstan to reach world standard, the republic must look to sustainable development, which rejects its concentration on raw materials and makes it more focused on becoming a services-technology based economy in the long-term[1]. Implementation of this strategy will help increase the growth rate of the national economy by 8.8-9.2 % a year. This will more than treble GDP by 2015 compared to 2000. It also implies:

- Increasing the percentage of consumer goods production in GDP from 46.5 % to 50-52 % by 2015.
- Increasing the percentage of services provided by scientific and scientific-innovative activity in GDP from 0.9 % in 2000 to 1.5 – 1.7 % in 2015.
- Slowing the fall in the processing industry's percentage of GDP from 13.3 % in 2000 to 12-12 % in 2015 (this level would be equal to 10.9 % in 2015, if it were not for the industrial policy currently being pursued).

Non-implementation of the Strategy will lead to the situation, in which the added value percentage of mining in industrial output would amount to 55-56 % and to 50-51 % in oil extraction in 2015 against 31.0 % and 26.5 % in 2000. Taking Strategy implementation into account, the output of mining enterprises will come to only 46-47 %. The percentage of science-based and high-tech production will increase from 0.1 % of GDP in 2000 to 1-1.4 % of GDP in 2015.

Changes in quality will take place in the structure of added value in the processing industry. The share of metallurgy and metal processing will fall from 40.1 % of the total added value volume in the processing industry to 27-28 % and the percentage of agricultural output processing will grow from 38.1 % to 45-46 %. The percentage of science-based and high-tech output will be 9-11 % against 0.6 % in 2000.

The railways of the Republic must play an important role in solving the above-mentioned tasks. The percentage of railway transport in the GDP of Kazakhstan increased from 6 % to 7 % and amounted to 264.3 billion tenge in 2002 compared to 2000. In

[1] The innovative industrial development strategy of the Republic of Kazakhstan

2000-2003 fixed capital investments increased by 2.3 times and amounted to 1,413,900,000 tenge. In the last five years there have been positive movements as a result of this activity and in 2003 the railways earned 20,961,200,000 tenge.

The efficiency of the domestic railway system increased as a result of the medium-term programme for the development of the NK Kazakhstan Temir Zholy OJSC's innovative activity for 2003-2005. The main objectives of the programme are: rehabilitating the mainline infrastructure with modern railway equipment, laying new railway lines, providing the branch with complete information and setting up an automated despatch management centre (ADMC)[2].

To implement the above-mentioned objectives the programme stipulates investments in the following directions:

- Rehabilitation and development of the infrastructure – 69,152,500,000 tenge.
- Construction of new railway lines – 938,300,000 tenge.
- Provision of information and development of communications – 12,698,400 tenge.
- Renovation of the locomotive depot – 21,400,100,000 tenge.
- Renovation of the carriage depot – 9,719,000 tenge.
- Creating new import-replacing products – 375, 600,000 tenge.
- Scientific research and experimental design work – 495,200,000 tenge.
- Introduction of efficient technologies – 835,800,000 tenge.
- Decreasing the journey time on the Almaty-Astana section – 4,137,700,000 tenge.
- Other (local) projects – 6,038,200,000 tenge.

In the course of the research the following problems of the railway system's development have been revealed:

a) depreciation of the main assets reached 60 %;

b) shortage of own and invested funds to renovate and modernize the main assets;

c) low level of automation of and provision of information to railway transport .

The development of innovative activity in railway transport is necessary for the following reasons:

the low level of competitiveness and sustainability of the enterprise and the simple reproduction of the main assets;

extending the competitive environment and reducing the own share of the cargo-transportation market;

the need to expand the volume of production.

To remove negative features in railway transport it is necessary:

to form a competitive strategic future for the branch by strengthening innovative activity;

to improve the innovations management system in the branch by choosing priority projects and rational use of the innovative potential;

to develop a purpose-oriented innovative programme for reducing risks connected with the provision of services;

to establish scientific-production divisions aimed at creating totally new technologies and services.

Very soon it will be necessary to solve serious tasks connected with further increasing the effectiveness and quality of cargo and passenger transportation and to attract transit cargo flows to the Republic of Kazakhstan along international transport corridors.

Implementation of the innovative strategy for the development of the Republic's railway transport based on the medium-term investment programme will take the country to a new level of cargo transportation and improve the use of and repairs to the rolling stock[3].

Implementing the basic directions in developing the railway sector presented in the Strategies for the Innovative Industrial Development of the Republic of Kazakhstan for 2003 – 2015 will promote this.

The main task includes expanding and improving the transportation of goods and passengers in compliance with the country's rapid economic growth in order to prevent the situation, in which the transport infrastructure would become a limiting factor to development. Another important task includes the maximum development of the country's transport potential.

The main advantage in developing transit transport through Kazakhstan includes significantly reducing distances. Even under ideal conditions it takes 20 days by sea to deliver goods from Berlin, Germany, to Lyanungan Port, China, but by rail it takes only 11 days and involves only half the distance.

The global economy makes it necessary to organise international transport corridors for mutually profitable trade between countries, providing access to world transport links to all states and subjects. It is especially important for Kazakhstan to join this well developed transport system, as an irreplaceable link.

The modern concept of developing a network of international transport corridors going through Kazakhstan is based on three prioritised directions:

[2] The program for the development of the NK Kazakhstan Temir Zholy OJSC's innovational activity for 2003-2005 of October 9th 2003.

[3] Shamiganov B.S. Tasks and future prospects for the innovative development of rail transport. Printed as part of the collected materials of the Innovative Industrial Development of the Republic of Kazakhstan: Experience, Tasks and Future Prospects International Conference, Almaty 2004, P. 185.

- Russia, Europe and the Baltics;
- China, Japan and South East Asia;
- Central Asian and Trans-Caucasus republics as well as Iran and Turkey.

Each of these directions has existing international transport corridors including a number of land and sea routes. They are technically well equipped and are intended to concentrate international transit transport along these routes.

Six railway corridors go through Kazakhstan. The railway junction located on the international transport corridors in the eastern part of the country the Druzhba (Friendship) Route, has a special place in the country's transport system.

The reason for developing the transport sector is the need to efficiently deliver exports to external markets and offer a wide choice to users.

Prioritised directions of this sector's development include creating an effective and technologically updated transport system to maximise the transit potential.

Work on transforming the transport system into a condition meeting the country's needs should continue up to 2015. It includes improving the railway network's configuration including laying new railways, developing an industrial base for manufacturing and repairing rolling stock and improving the railway tariff system.

The national railway network covers the entire country but needs to be developed and optimised. So work was started on the Altynsarino – Khromtau line, as this will connect the country's northern and western regions. Druzhba (Friendship) Station/Junction in Kazakhstan and Alashankou Station in China are the key links for the Trans-Asian and Euro-Asian mainline railways. Taking this into consideration, Kazakhstan is paying great attention to its reconstruction and development and plans are in hand to undertake a number of measures in the near future to increase the stations' capacities [4].

Important processes for integrating the railways into the modern world transport system are aimed at forming international trans-continental routes. To do so, one should design optimum layouts for Kazakhstan's railways that would accelerate goods and passengers' delivery, reduce transport distances, develop the republic's transit capacities and increase the railways' competitiveness. Rebuilding the transport system, building new high-speed railways and modernising rolling stock are the important components of this.

One of the basic ways of improving railway transport is rehabilitating and modernising the system to improve the movement and carrying capacities of the basic mainline railways, primarily, the main transport corridors. Further expansion of the progressive transit capacity is especially feasible for northern Kazakhstan where there is a high level of goods movement on the railway network and the presence of relatively cheap electricity. Work on the electrification of the Pavlodar – Ekibastuz line could reasonably be extended to the Kostanai – Zheleznorudnaya line and also the Kokshetau – Petropavlovsk line, as this forms part of the country's northern railway corridor[5].

Priorities for the innovative policy for developing the railway sector include the development of potentially competitive products.

World practice shows that the railway sector can cooperate with the private sector in carrying out structural reforms, the most successful examples of which are in Japan, South Korea, Malaysia and other countries that have drastically improved their economic development in the last 30 years.

China is also cooperating with the private sector in developing strategic innovative development of the railway sector.

An important direction for railway transport development means building new lines that will reduce transport distances to reduce transport costs when producing and selling products thus increasing the national economy's effectiveness. Because of this, it is necessary to optimise the internal railway network.

To increase transport potential there should be outlets to other countries with world standard gauge tracks, as this will increase the competitiveness of railway transport and accelerate the delivery of goods and passengers. In connection with this, the programme to develop Dostuk Station for 2003-2006 is already underway and this includes modernising the equipment and reducing the time for crossing borders, to make transport along international transport corridors competitive.

Great attention should be paid to the Programme for Information Development for Rail Transport that aims to introduce information management systems for the railway sector including transport, infrastructure, marketing and economic management in general.

Carrying out of this Programme in compliance with the Indicative Plan for Railway Transport Development will create a communications system based on a fibre optic data transmission network and the introduction of new information technologies.

[4]About the Strategy for Innovative Industrial Development of the Republic of Kazakhstan for 2003-2014.

[5]Atamkulov E.D., Zhangaskin K.K. Railway Transport in Kazakhstan: Transportation Process. B. K. Aliyarov: Monography, Vol. 2. – Almaty: MTIA, 2004, P.134.