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HISTORY OF THE DEVELOPMENT OF THE MIRZACHUL REGION

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Abstract: This article provides a comprehensive historical, economic, and environmental analysis of the process of developing the Mirzachul region, which covers the Syrdarya and Jizzakh provinces of Uzbekistan. Beginning in the first half of the 20th century, large-scale irrigation and land-reclamation (melioration) projects were gradually implemented, accompanied by Soviet-era infrastructure construction, population migration, and the establishment of new state farms and towns. While the development of Mirzachul contributed significantly to the rapid growth of cotton production and overall socio-economic progress, it also led to soil salinization, water scarcity, and other ecological problems. In the years of independence, measures have been taken to introduce water-saving technologies, improve soil reclamation, and promote sustainable agriculture in the area.

Keywords: Mirzachul, land development, irrigation, land reclamation, cotton growing, migration, environmental issues, soil salinization, agriculture of Uzbekistan, water-saving technologies.

Introduction. Mirzachul is one of Uzbekistan's most significant meliorative and agrarian regions, encompassing the Syrdarya and Jizzakh provinces. Since the Soviet era, this area has held strategic importance for the country's economy due to its vast land resources and water-supply potential. At the same time, the development of Mirzachul has been a complex process, shaped by geographic, social, economic, and environmental factors. This article provides a detailed analysis of the stages of Mirzachul's development, its socio-economic achievements, negative consequences, and present-day challenges.

Geographically, Mirzachul lies within semi-desert and desert landscapes. Summers are hot, with temperatures reaching +35 to +40 °C, while winters are relatively cold and dry. Precipitation is scarce, falling mainly in spring and autumn, and almost absent in summer. The soil surface shows high levels of salinity and soluble salts, while groundwater lies in deep layers. Due to the lack of natural drainage and irrigation, groundwater levels remain high, contributing to persistent salinization.

Early Central-Stage Efforts. Initial attempts at large-scale development in Mirzachul began in the early 20th century, particularly during the 1910s and 1920s. At that time, only small irrigation projects existed, and they were far from comprehensive. Between 1911 and 1914, the area of irrigated land reached about 95,000 hectares, but roughly 60,000 hectares became unusable due to salinization and waterlogging.

By 1921, irrigated land covered 20,000 hectares; in 1924 it expanded to 50,000 hectares;

and by 1928 it reached 67,000 hectares. In 1925, a seven-field cotton–alfalfa crop rotation system was introduced for the first time on a state farm (sovkhoz), which proved to be highly significant for the Mirzachul region.

The resolutions of the 20th Congress of the Communist Party of the Soviet Union (CPSU) emphasized the need to implement crop rotation schemes adapted to each soil and climatic zone. The reason was clear: years of continuous cotton monoculture had depleted soil fertility and led to noticeable soil exhaustion. To preserve fertility, various crop rotation practices were considered essential. In irrigated farming areas of Central Asia, only a limited number of crops were used in rotation, with cotton and alfalfa serving as the primary pair.

Alfalfa adapted well to irrigated cotton-growing zones. Its benefits were substantial: the numerous nodules on its root system hosted nitrogen-fixing bacteria, enabling a single hectare of alfalfa over two to three years to accumulate 8–10 tons—or even more—of organic matter. In addition, alfalfa improved soil structure and water retention capacity. Researchers such as V.I. Yerimenko and N.K. Belyabo noted that employing crop rotation could reduce water consumption by about 20 percent.

Moreover, when cotton was grown continuously on the same plot, pests such as aphids, spider mites, and cotton bollworms multiplied rapidly. Rotating cotton with alfalfa was therefore an important preventive measure, as alfalfa helped cleanse cotton fields of pests and disease agents.

Early State Farms and Resettlement. During the 1920s and 1930s, as part of the Soviet government's collectivization policy, state farms (sovkhozes) were established in the Mirzachul region, and population resettlement began. Land preparation, along with the construction of small canals and drainage networks, was initiated during this period. However, technical equipment, infrastructure, and financial resources remained limited.

Main Stages of Development (1946–1990)

1. Expansion and Infrastructure Construction Beginning in 1946, the pace of large-scale hydraulic projects in Mirzachul accelerated. Major canals such as the Central and Southern Mirzachul canals, along with collector–drainage networks, were built to expand the irrigation system, regulate groundwater levels, and control salinization. By 1956 the area of irrigated land had reached 205,500 hectares.

Many of these projects were carried out by specialized organizations from Russia and funded through investments from the central Soviet government.

2. Cotton Farming and Agricultural Production. Cotton became the dominant crop of the region. Through irrigation, the application of fertilizers, mechanization, and the use of ventilation and drainage equipment, cotton yields increased significantly.

Other crops—such as wheat, vegetables, and melons—were also cultivated on irrigated lands, helping to ensure food security and meet the needs of local markets.

3. Social and Demographic Changes. Large-scale resettlement programs brought farmers and workers from various ethnic groups, including Russians, Ukrainians, and Azerbaijanis, to Mirzachul, altering the region's ethnic composition and increasing population density.

New towns and villages emerged, accompanied by the development of infrastructure such as roads, housing, and social services. For example, the city of Yangiyer expanded after 1957 as part of the land-reclamation projects.

The labor demands of irrigation and cotton cultivation required a sizable workforce. While local employment opportunities grew, issues related to working conditions, wages, and

labor organization also became pressing concerns.

Positive Economic Outcomes. The development of the Mirzachul region produced significant economic benefits.

- Yields and Exports: With rising cotton yields, export potential expanded considerably. During the Soviet era, Mirzachul became one of Uzbekistan's leading cotton-producing areas.
- Local Infrastructure: The construction of roads, communications networks, schools, clinics, and electrical facilities improved the quality of life for local residents.
- Financial Gains: The sale of agricultural products generated revenue both in domestic markets and across the Soviet Union, creating opportunities to reinvest in the cotton sector.

Conclusion.

The reclamation of Mirzachul marked an important stage in the development of Uzbekistan's agriculture and economy. These efforts enhanced agrarian potential, increased employment, and fostered the growth of local infrastructure. However, environmental problems—such as soil salinization and degradation, inadequate drainage, and inefficient water management—remain unresolved. The future requires the adoption of modern technologies, comprehensive ecological monitoring, stronger labor protections, and policies aimed at conserving land and water resources.

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