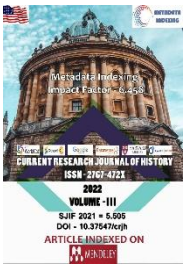
CURRENT RESEARCH JOURNAL OF HISTORY
(ISSN –2767-472X)
VOLUME 03 ISSUE 05 Pages: 34-41
SJIF IMPACT FACTOR (2021: 5. 505) (2022: 5. 728)
OCLC – 1243560778 METADATA IF – 6.458
Publisher: Master Journals



Journal Website: https://masterjournals.com/index.php/crjh



Research Article

# SOME COMMENTS ON THE HISTORY OF THE DEVELOPMENT OF THE CHEMICAL INDUSTRY IN UZBEKISTAN

**Submission Date:** May 10, 2022, **Accepted Date:** May 20, 2022,
**Published Date:** May 30, 2022
**Crossref doi:** https://doi.org/10.37547/history-crjh-03-05-07

**Gullola T. Yusupova**
**Independent researcher National University of Uzbekistan**

## ABSTRACT

The development of the chemical industry in Uzbekistan after the Second World War is directly related to the cotton monopoly, the chemical testing of plant raw materials in the republic. Special attention was paid to their synthesis, application in medicine, food and agriculture, synthesis and implementation of defioland and pesticides for cotton, complex processing of cotton seeds and their use in the food industry. At the same time, special attention was paid to the cultivation of mineral fertilizers for the national economy. For this purpose, several industrial enterprises were included in the Department of Chemical Industry established under the National Economic Council of the Uzbek SSR. These enterprises have fully served the interests of the country's economy and have become an industry that causes endless damage to the environment. The article analyzes the construction of chemical enterprises in Uzbekistan, their role in the national economy, the damage to the environment and human health on the example of the Fergana economic region on the basis of archival data and scientific literature.

## KEYWORDS

Raw materials, chemical testing, synthesis, defioland, pesticide, viscose, acetate, silk, acid, mineral fertilizer, toxins, polymer chemistry, electrochemical plant, superphosphate, oxygen plant, hydrolysis plant, asbestos industry, rubber-technical, gramplate, acetelon, organic synthesis, technology, tsex, light industry, national economy.

CURRENT RESEARCH JOURNAL OF HISTORY
(ISSN –2767-472X)
VOLUME 03 ISSUE 05 Pages: 34-41
SJIF IMPACT FACTOR (2021: 5. 505) (2022: 5. 728)
OCLC – 1243560778 METADATA IF – 6.458
Publisher: Master Journals

## INTRODUCTION

Uzbekistan's specialization in the production of raw materials has given impetus to the development of the chemical industry in the country. After the Second World War, more than 100 types of industries serving the interests of the country were formed in the republic. In order to develop the chemical industry, five independent research institutes were established under the laboratory of the Institute of Chemistry, founded in 1933. In this process, special attention was paid to other areas of the chemical industry that could serve science. As a result, in 1956, the Institute of Plant Chemistry of the Academy of Sciences of the Uzbek SSR was opened, where scientific research on chemical testing of plant raw materials, their synthesis, use in medicine, food and agriculture. The institute also carried out the extraction and use of drugs from plant substances, the synthesis and implementation of defioland and pesticides for agriculture, primarily cotton, complex processing of cotton seeds and their use in the food industry.

It should be noted that the chemical industry of the republic was to serve the development of cotton growing. It is known that one-third of cotton is fiber and two-thirds is seed. While long fibers of cotton were used in the textile industry to weave various fabrics, short fibers were used as raw materials. From these "wastes" called lint, fluff, viscose, acetate, silk, carboxymethylcellulose were obtained. Due to the fact that the leaves are rich in citric and malic acids, in 1959 in Tashkent was established Research Institute of Chemistry and Technology of Cellulose Ginning. In 1964, the Central Asian Oil Refining Institute was opened, and in 1980 it was transformed into the All-Union Research Institute of Chemical Technology. His research has focused mainly on the medical industry. It carried out high-efficiency technological processes, automation, production of chemical pharmaceuticals through fine organic synthesis, creation of environmentally safe technological processes, bringing waste to a safe level and creating their feasibility study.

It should be noted that along with the chemical enterprises established in Uzbekistan, the production of mineral fertilizers has been growing from year to year. For example, in 1940, two thousand tons of mineral fertilizers were produced in the republic, and by 1969, 3 million tons of mineral fertilizers were produced. 491 thousand tons [1]. The development of the chemical industry was also continued.

## THE MAIN FINDINGS AND RESULTS

Founded in 1973, the main tasks of the Institute of Bioorganic Chemistry of the Academy of Sciences of the Uzbek SSR are to isolate alkaloids, polyphenols and other derivatives from plants, effective use in medicine and agriculture, as well as the solution of fundamental laws of bioorganic science by examining the structure, effects and mechanisms of animal and protein toxins. The Institute of Polymer Chemistry and Physics of the Academy of Sciences of the Uzbek SSR is the smallest among the institutes of chemistry in the years under study. The scientific direction of the institute was the study of chemistry and physics of polymers related to medicine, as well as the study of polymer coordination compounds and the application of its achievements in the national economy.

In order to use the products of the chemical industry in the national economy, on July 1, 1960 at a meeting with the participation of the Central Committee of the Communist Party of Uzbekistan and the Council of Ministers of the Uzbek SSR, the Department of Chemical Industry was established. From July to August 1960, the department registered 14

CURRENT RESEARCH JOURNAL OF HISTORY
(ISSN –2767-472X)
VOLUME 03 ISSUE 05 Pages: 34-41
SJIF IMPACT FACTOR (2021: 5. 505) (2022: 5. 728)
OCLC – 1243560778 METADATA IF – 6.458
Publisher: Master Journals

enterprises operating in different regions of the country. In the chemical industry - Chirchik electrochemical plant, Tashkent lacquer paint plant, Kokand superphosphate plant, Samarkand superphosphate plant, Namangan plant No. 518 in Andijan region, Leninsk oxygen plant in Andijan region, Tashkent Chemical-Pharmaceutical Plant, Tashkent Paper Plant, Fergana Hydrolysis Plant, Andijan Hydrolysis Plant, New Road Hydrolysis Plant, Rubber asbestos industry - Tashkent wickel plant, Light nitrogen - Pop rubber - technical and rubber footwear plant and Tashkent gramophone records, as well as Fergana Nitrogen Fertilizer Plant under construction, Navoi Chemical Combine under construction, the Quvasoy chemical plant, which has been under repair since 1957, and the Fergana acetate plant, the design of which has been completed, have also been included[2].

It should be noted that among the economic regions of Uzbekistan, the Fergana economic region was distinguished by the large number of enterprises adapted to the cultivation of cotton and the production of chemical products. Favorable natural and climatic conditions of the Fergana economic region have accelerated the specialization of the region in the cultivation of cotton and other crops. As a result, in order to ensure the cultivation of cotton in the cities of the valley were launched enterprises producing mineral fertilizers, spare parts for harvesting machines, semi-finished cotton. The main industrial enterprises in the Fergana Valley have been built in Kokand, Margilan, Quvasoy, Fergana, Andijan and Namangan. In the post-World War II years, former military plants were soon transformed into chemical plants, and enterprises producing mineral fertilizers and defoliants against cotton pests were built in Andijan, Namangan and Kokand[3].

During this period, the issue of supply of mineral fertilizers throughout the Union was considered an important task of the party and the government, and the national economy of Uzbekistan was not left out of such instructions. As a result, special attention was paid to the further development of the chemical industry. Gas plays an important role in the development of the chemical industry in the country, and it is the oil and gas fields in the Fergana Valley that have allowed the development of the chemical industry. As a result, the production of acetelone and various products of organic synthesis, including raw materials for the production of plastics, acetate silk, artificial wool and other products, was launched. Even the use of gas as a raw material instead of coal in nitrogen fertilizer plants increases the cost of ammonia by 9.5 million tons per year. rubles was also calculated. For this purpose, the equipment of Tashgazoapparat and Ferganagazoapparat plants for the production of gas fittings and other products in the country was re-equipped. Various orders were also placed with other factories. For example, the production of cylinders for gas supply to households was entrusted to the plant "Bolshevik" in Kokand, the production of containers with a capacity of 2.5-50 cubic meters of gas was entrusted to the plant "Uzbekhimmash"[4].

Historically, the Kokand superphosphate plant was established under the auspices of a fertilizer plant owned by the Council of People's Commissars of Heavy Industry Glavazot, which was commissioned in 1935. In the first years it produced 10,000 tons of products, in 1938 it reached 93.4 thousand tons [5]. The first manufactured product was a mixture of organic mineral fertilizers, superphosphate with ammonium nitrate and superphosphate with ammonium sulfate. In 1941, by the order of the USSR CCS and the decision of the Central Committee of the CPSU (b), the reconstruction of the Kokand

CURRENT RESEARCH JOURNAL OF HISTORY
(ISSN –2767-472X)
VOLUME 03 ISSUE 05 Pages: 34-41
SJIF IMPACT FACTOR (2021: 5. 505) (2022: 5. 728)
OCLC – 1243560778 METADATA IF – 6.458
Publisher: Master Journals

superphosphate plant under the Kokand Nitrogen Fertilizer Plant began. Equipment imported from Nevsky and Voskresensky plants of the country was installed at the plant. On April 6, 1946, the first stage of the Kokand superphosphate plant was put into operation. To obtain superphosphate, the plant used equipment imported from the Kola Peninsula and transported sulfuric acid as raw materials. In 1947, the construction of the sulfuric acid plant was completed and production began. The most important deposits of phosphorites in the USSR were in the Karatov basin of the Aktyubinsk region of the Kazakh SSR, in the Kirov, Leningrad, Moscow, Kursk, Bryansk, Kaluga regions of the RSFSR, and in the Estonian SSR [6]. Phosphorites from the Karatov deposit in the territory of the Kazakh SSR were used to produce products at the Kokand superphosphate plant. Raw materials were also imported from other regions of the country. In particular, the finished superphosphate required for the fertilizer mixture was supplied from the country's Voskresensk and Neva chemical plants, and ammonium nitrate from the Berezniki and Kemerovo nitrogen fertilizer plants. While ammonium sulfate was imported from the Coke Chemical Plant, kunjara was used in oil mills in the Fergana Valley and was imported from there.

On December 31, 1949, by order of the Ministry of Chemical Industry of the Uzbek SSR, the construction of a superphosphate plant began on the basis of new projects. In 1958, the superphosphate and sulfuric acid shops were renovated. Starting this year, a new plant has been launched to produce 330,000 tons of superphosphate per year [7]. Construction of a sulfur plant at the plant was completed in 1956. In order to further improve the physical and chemical composition of the product, in 1952-1953, a technology for the production of ammonium superphosphate was launched [8]. In 1953 and 1959, on the basis of new technologies introduced at the plant, in the 1960s the plant had a production capacity of 100,000 tons of ammonium superphosphate per year. The plant has a superphosphate plant, a sulfur plant and an oxygen plant. The plant also had auxiliary shops, such as supply mechanics, repair and construction shop, electrical shop, communication shop, instrument control and measurement shop, transport [9]. In 1961, the Kokand superphosphate plant produced 367,000 tons of superphosphate, 140,000 tons of sulfur, 2,000 tons of 30m3 / h sodium silicon fluoride and 6,000 kg of selenium sludge product production capacity [10].

However, the misappropriation of state funds, irresponsibility of the people, the commissioning of the built shops without completion are also the reasons for the repair of the plant's superphosphate, sulfur, oxygen, repair - mechanical, repair - construction, electrical repair, gas supply. was In fact, the Kokand superphosphate plant was warned in 1952 that the plant would not be able to meet the technical requirements[11].

The construction of these plants was also to be facilitated by active exchange of goods and experience with enterprises in different regions of the country. In mid-1959, builders from different regions of the country, including Chirchik, Tashkent, the Kazakh SSR, the Kyrgyz SSR, the Ukrainian SSR, and many cities of the RSFSR, participated in the construction of the Fergana Nitrogen Fertilizer Plant. The plant was attached to the Department of Chemical Industry of the Soviet of National Economy of the Uzbek SSR. Although the construction of the Fergana nitrogen fertilizer plant was supposed to be completed in 1962, but due to the large number of unfinished works, the plant was not able to produce products on time. The resulting damage amounted to 711 thousand rubles [12].

CURRENT RESEARCH JOURNAL OF HISTORY
(ISSN –2767-472X)
VOLUME 03 ISSUE 05 Pages: 34-41
SJIF IMPACT FACTOR (2021: 5. 505) (2022: 5. 728)
OCLC – 1243560778 METADATA IF – 6.458
Publisher: Master Journals

At that time, a number of chemical enterprises were operating in the Fergana economic region. In particular, Namangan Factory No. 518 was established in 1942 on the basis of the "Viskoza" factory, which was evacuated from Mtishe, Moscow region, and produced silk numbers 35 and 60. By 1961, production capacity had reached 780 tons per year [13]. The factory had workshops for chemistry, weaving, decorating and service. Although the technology at the plant was outdated, it was not possible to expand it because it was located in the city center. The Leninsk Oxygen Plant in Andijan was commissioned in 1949 and produced gaseous oxygen. The factory capacity was not fully used due to the lack of gas cylinders for consumers [14].

Fergana hydrolysis plant was established in 1946 and includes a hydrolysis-alcohol plant producing alcohol, furfural, 100 tons of acid per year, 880 thousand m3 / hydrogen per year, 290 thousand m3 of oxygen, plant for the production of 620 tons of carbon dioxide, xylitan and furfural per year, catalyst, hydraulic brake fluid, shop for the production of liquid glass, groundwater and circulating water pumping shop, electrical shop, repair-mechanical shop, repair-construction shop and other shops at the disposal of. The main raw material for the plant is shellux from the Fergana Oil and Gas Combine [15]. However, the untimely delivery of shellac, tar and other products did not allow the planned plans to be implemented [16]. As a result, the plan was fulfilled by only 25.8% [17]. At present, the hydrolysis yeast plant is a new branch in the chemical industry of the union. The plant processes non-food plant products, in particular, cotton husks, cotton stalks and stalks, rice straw, wood waste, etc. Ethyl alcohol, furfural, feed yeast, food glucose, xylitan polyhydric alcohols, organic acids and other products.

The Pop Plant for the Production of Rubber-Technical Products and Rubber Shoes was established at the Plant for the Production of Mailboxes No. 275, which produces 3,870,000 pairs of rubber shoes (kalish) per year and produces 790 tons of rubber-technical products per year. and in addition there were 5 different workshops performing different functions [18]. The plant is the only one specializing in the production of carboxyl-methylcellulose, which is needed to drill oil and gas wells.

The Kuvasay Cement and Lime Plant named after M. Frunze has become an enterprise supplying construction materials to Uzbekistan. The plant was launched in 1929 and included the construction of a cement plant. On February 21, 1932, the plant produced the first product - about 42 tons, and in 1975 the plant produced more than 800,000 tons of cement [19]. Construction of the Quvasoy glassware factory, named after the 30th anniversary of the victory, began in 1967 and began production in 1974. The main task of the plant was to supply envelope factories and the population with glass products in Central Asia and Kazakhstan.

In order to meet the growing demand of the light industry for chemical fibers, the first chemical fiber plant in the country was built in 1970 in Fergana. The capacity of the plant was 14.5 thousand tons of acetate fiber. The Fergana Chemical Fiber Plant started producing yarn in 1969 for the production of fabrics and knitwear of various colors.

At the same time, given the high population density and high unemployment in the Fergana Valley, industrial enterprises have been built in the city centers. Over time, they have also become enterprises that have a serious negative impact on the environmental situation. There are 39 enterprises in and around the industrial zone of Kokand alone, most of which have not used wastewater treatment plants.

CURRENT RESEARCH JOURNAL OF HISTORY
(ISSN –2767-472X)
VOLUME 03 ISSUE 05 Pages: 34-41
SJIF IMPACT FACTOR (2021: 5. 505) (2022: 5. 728)
OCLC – 1243560778 METADATA IF – 6.458
Publisher: Master Journals

Waste-phosphogypsum "mountains" have appeared in Kokand fertilizer plants. Several million rubles had to be spent to keep them and not pollute the environment [20]. The Kokand superphosphate plant has been dumping wastewater into the Kipchak canal, which runs through Kokand for years. Diseases such as fluorosis (tooth decay), rickets (calcium deficiency) have increased among the local population[21]. These adverse environmental conditions have led to the birth of children with disabilities [22]. Industrial enterprises in the Fergana Valley have also become a major source of water pollution in the Syrdarya, using a large amount of water at the new Kokand Chemical Plant, which was commissioned in 1983. However, due to the plant's inability to treat water, the plant has polluted the surrounding water resources, especially groundwater[23].

Andijan region is also one of the regions with a developed chemical industry. In 1968, there were more than 15 industrial enterprises in the city, and in 1976, 26 industrial enterprises. However, the technical support of enterprises was low, and low-quality products were also produced due to non-compliance of equipment and safety precautions. Andijan has industrial enterprises such as a hydrolysis plant specializing in the production of furfural, electric motors, metalloremont, cotton ginning, canning and furniture factories. The Andijan Hydrolysis Plant was launched in 1953. Its main building has a hydrolysis unit equipped with 12 hydrolysis units, 6 neutralization units, three broiler tanks, 6 broiler units with separators and a number of shops [24]. The main raw material for the plant is shellux from the Andijan Oil and Gas Combine [25].

The Andijan hydrolysis plant is located in the heart of the city, which pollutes the air in the region by increasing its concentration by 4-5 times. Of course, the issue of moving the plant to the outskirts of the city has been raised for several years. However, no serious measures were taken, only the closure of some shops within a certain period of time. Similar problems could be seen in Tashkent and Fergana regions.

Until 1964, a uranium ore tailings dump was located in the village of Moylisuv in Kyrgyzstan, near the border with Andijan. As a result, 30 km from Andijan region. along the banks of the Moylisuv River in remote Kyrgyzstan, with a volume of 2.5 million. m3 of radioactive waste, 23 stockpiles of balanced ores [26], This, of course, led to the emergence of regional environmental problems, deterioration of sanitary and hygienic conditions of the environment, a 3.4% increase in oncological and respiratory diseases among the population[27].

By the 1980s, soil, water, atmosphere, and population suffering from industrial waste in Andijan had increased. The damage to industrial lands by chemical enterprises built in Andijan, Fergana and Kokand was much higher than normal. The cotton ginning and chemical industries have few technical bases, and the machine dust mills and other equipment have not been repaired for years. As a result, during inspections in 1986, the Andijan hydrolysis plant alone emitted 739 tons of waste per year, which doubled in 1987 [28].

The damage to the environment of the Andijan hydrolysis plant was so great that 7 types of solid chemical emissions into the atmosphere, 20 km from itself. has been discharging wastewater into a canal in the distance. As a result, the quality of drinking water has changed. In 1988, an inspection by the provincial public authorities found an increase in the number of patients with acute intestinal diseases among the population living near the hydrolysis plant[29].

In total, by 1989, there were 723 industrial enterprises in the region [30]. The amount of dust and harmful

CURRENT RESEARCH JOURNAL OF HISTORY
(ISSN –2767-472X)
VOLUME 03 ISSUE 05 Pages: 34-41
SJIF IMPACT FACTOR (2021: 5. 505) (2022: 5. 728)
OCLC – 1243560778 METADATA IF – 6.458
Publisher: Master Journals

emissions from enterprises has been increasing year by year, which has led to environmental degradation, deterioration of workers' health, and pollution of the environment, water, soil, and the atmosphere. Andijan region ranks first in the country in terms of air pollution [31].

It should be noted that in the early 1980s, industrial enterprises were located near residential areas and did not have sanitary protection zones, which led to the deterioration of sanitary and living conditions. In 1989, the State Committee for Nature Protection of the Uzbek SSR decided to close the New Kokand chemical plant, which produces ammophos, which poisons the fresh groundwater of Sokh. It was only during these years that serious mistakes were made in the construction of the plant"[32] clearly stated [33].

## CONCLUSION

In short, the specialization of Uzbekistan in the cultivation of raw materials, ie the establishment of a single cotton government, gave impetus to the development of the chemical industry in the country, as the chemical industry of the republic should serve to accelerate cotton production. As a result, many chemical enterprises have been opened throughout the country, especially in the Fergana economic region, where the production of mineral fertilizers has been increasing year by year. As a result of the construction of these plants with active exchange of goods and experience with enterprises in different regions of the country, the chemical industry also became interconnected with the enterprises of the allied republics in the supply of raw materials and products and caused great damage to the environment.

## REFERENCES

1. Axmedov E. The role of Uzbekistan in the All-Union division of labor. - Tashkent: Uzbekistan KP MQ Publishing House, 1970. - 23 pages.
2. National News Agency of Uzbekistan, R-2598-fund, List 1, Volume 10, Pages 2-3.
3. Gaeva T., Pisareva V. Ecological situation in Uzbekistan. March 12, 2017 // http://www.igpi.ru/bib/igpi_publ/uzb_eco.html.
4. Savchenko P., Butorin A. Gas industry of Uzbekistan. - Tashkent: State Publishing House, 1959. - p.16.
5. National News Agency of Uzbekistan, R-2598-fund, 1st list, 10th compilation volume, 5th sheet.
6. Abramov M. Fergana is a big chemical country. - Tashkent: Uzbekistan, 1978. - 12 pages.
7. National News Agency of Uzbekistan, R-2598-fund, 1st list, 1st compilation volume, 2nd sheet.
8. National News Agency of Uzbekistan, fund R-2598, List 1, Collection 1, Sheets 2-3.
9. National News Agency of Uzbekistan, fund R-2598, list 1, collection 1, sheet 5.
10. National News Agency of Uzbekistan, R-2598-fund, 1st list, 10th compilation volume, 5th sheet.
11. Kokand city DA, fund 1124, list 7, collection volume 518, page 103.
12. National News Agency of Uzbekistan, Fund R-2598, List 1, Volume 153, Sheet 2.
13. National News Agency of Uzbekistan, fund R-2598, list 1, collection 10, sheet 6.
14. National News Agency of Uzbekistan, R-2598-fund, 1st list, 10th compilation volume, 8th sheet.

CURRENT RESEARCH JOURNAL OF HISTORY
(ISSN –2767-472X)
VOLUME 03 ISSUE 05 Pages: 34-41
SJIF IMPACT FACTOR (2021: 5. 505) (2022: 5. 728)
OCLC – 1243560778 METADATA IF – 6.458
Publisher: Master Journals

15. National News Agency of Uzbekistan, R-2598-fund, 1st list, 10th compilation volume, 9th sheet.
16. National News Agency of Uzbekistan, Fund R-2598, List 1, Volume 10, Sheet 17.
17. National News Agency of Uzbekistan, Fund R-2598, List 1, Volume 10, Page 21.
18. National News Agency of Uzbekistan, R-2598-fund, 1st list, 10th compilation volume, 11th sheet.
19. Abramov M. Fergana is a big chemical country. - Tashkent: Uzbekistan, 1978. - 25 pages.
20. Asqarov M. Prospects of chemistry in Uzbekistan. - Tashkent: Fan, 1985. - 35 pages.
21. Ergashev O., Otaboev Sh., sharipov R., Ergashev T. The ecological significance of water in human life. - Tashkent: Fan, 2009. – p. 258.
22. Axmedov E. Cities of Uzbekistan. - Tashkent: Uzbekistan, 1991. - 185 pages.
23. National News Agency of Uzbekistan, Fund R-2742, List 1, Volume 98, Page 83.
24. National News Agency of Uzbekistan, R-2598-fund, 1st list, 10th compilation volume, 9th sheet.
25. National News Agency of Uzbekistan, Fund R-2598, List 1, Collection 10, Sheet 10.
26. Ergashev A., Ergashev T. Human ecology. - Tashkent: Fan, 2009. - P.156.
27. Ergashev A. Ecological safety of human life. - Tashkent: Chinor, 2007. - p.160.
28. Raximova G. The impact of industrial development of the Fergana Valley on the ecological situation in the 50-90s of the XX century. History. fan. Doctor of Philosophy (PhD) dis… Tashkent, 2018. - 81 pages.
29. Raximova G. The impact of industrial development of the Fergana Valley on the ecological situation in the 50-90s of the XX century. History. fan. Doctor of Philosophy (PhD) dis… - Tashkent, 2018. - 81 pages.
30. Shodimetov Yu. Introduction to social ecology. - Tashkent: Teacher, 1994. - 198 pages.
31. Ergashev A., Ergashev T. Human ecology. - Tashkent: Fan, 2009. - 148 pages.
32. Orlov A. Buried a chemical plant // News. July 22, 1989.
33. Kokand superphosphate plant was fined 198,743 rubles for polluting the Syrdarya water and warned to stop discharging toxic wastewater until January 1, 1988. (Efimov E. The deadline was presented to the Kokand superphosphate plant. // Rural truth. August 22, 1987.