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SECTION 2. INNOVATIONS IN STATE GOVERNANCE OF ECONOMIC GROWTH

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INNOVATIVE PROGRAMS OF AGRARIAN DEVELOPMENT OF THE UKRAINE’S SOUTHERN REGIONS AND THE CRIMEAN PENINSULA: FORMATION OF THE UNIFORM ECOLOGICAL AND ECONOMIC COMPLEX

Summary. The article analyzes the programs that were implemented in the Ukraine’s southern areas (through 1954) and the Crimea after the end of World War II. Studied were the programs of providing the electric power base for agricultural development in those regions within the rural electrification program and establishing the Southern Electric Power Area that would include the Trans-Dnieper area, southern areas of the Ukrainian SSR and the Crimea. The demographic situation in the Crimea and the Ukraine’s southern region and the Soviet government’s policy for its improvement in the period after World War II, in particular, by resettling the population from other regions, were also analyzed. The issues of providing the conditions for agricultural development by constructing the irrigation system in the southern areas of the Ukrainian SSR and northern areas of the Crimea was detailed. The author also drew attention to the programs of constructing the electric power stations, especially the Kakhovka Station, the high-voltage transmission lines, and the South Ukrainian and North Crimean Canals. The main set of problems analyzed in the article are the programs of development and cultivation of such crops as cotton and rice that were new to the Ukraine’s southern areas and the Crimea, there was also an idea to develop citrus plant cultivation. The study was based on a collection of archive documents that reveal the actual economic condition and were only available to the bodies of the ruling party, the KP(b)U [Communist Party (of Bolsheviks) of Ukraine]. Such programs, the implementation of which was attempted for economic development of the Ukraine’s southern areas and the Crimea, were to ensure the development of the region’s economy that declined after World War II. As a result, the integral economic complex was established on the territorial basis of the Ukraine’s southern areas and the Crimean Peninsula’s territory.

Keywords: Crimean peninsula, southern regions of Ukraine, agriculture, demographic situation, energy, cotton production, climatic condition

The establishment of the regional economic complex based in the Ukraine’s southern areas and the Crimean Peninsula was among the most demonstrable examples of economic development of territories in the history of the Ukrainian economy after the end of World War II. In that period, the Ukrainian economy sustained considerable destruction due to the military actions, and demographic losses were substantial as well. Situation in the Crimea featured demographic consequences of deportation of the
indigenous people in 1944; in addition, agriculture declined due to the lengthy interval in farming throughout the Ukraine’s southern areas and the Crimean Peninsula. However, development of the region was of not only economic but also military and political importance. Therefore, the matter of populating the Ukraine’s southern areas and the Crimean Peninsula with people who were able to work in agriculture, and moreover, within the Soviet collective farm system, was pressing. It should be noted that such labor organization system in agriculture enabled the government to mobilize considerable labor resources of collective farms promptly and at minimum costs, actually by using cheap workforce. As the experience of centuries shows, economic development of areas could only be successful if based on a solid ground of agricultural development. It is on the agrarian basis that the formation of the economic complex in the southern areas of Ukraine and the northern areas of the Crimea took place. At the same time, the rest of the Crimean Peninsula’s territory, southern and coastal areas, developed owing to the economic “expansion” from the areas that were developed by implementation of agrarian projects in the southern areas of the Ukrainian SSR and northern areas of the Crimea.

After World War II ended, economic life of the Crimean Peninsula, and especially of the southern areas of the UkrSSR was extremely declined. That was because of a lengthy interval in land cultivation resulting in no prevention of the weed bitterling that became spread on the Kherson Oblast territories[1, s. 18-19]. The climate in the region of the Ukraine’s southern areas and Crimea’s northern areas was quite favorable for agricultural development given a large number of warm days in the year. It allowed to grow certain warm-season crops. In addition, both the southern areas of the UkrSSR and the northern areas of the Crimea had similar climatic parameters and formed steppe landscape. In terms of their agricultural specialization, the highland and northern areas of the Crimea differed from the rest of the peninsula’s territory, and crops suitable for such climate that were original for the soviet-period agriculture were grown in those areas. This refers to viticulture, as collective farms in such Crimean districts as Yalta, Alushta, and Sudak, as well as Alupka, were mainly focused on viticulture, fruit growing, and livestock farming targeted on wool[2, s. 43-45]. Viticulture in the Crimea was supported by the state at the time, in particular, in 1947, the TsK KP(b)U [Central Committee of the Communist Party
(of Bolsheviks) of Ukraine] requested that conditions for grape growing similar to those enjoyed at that time by the Crimean winegrowers be provided for support to viticulture in the Transcarpathia region[3, s. 371-372]. However, development of only viticulture and in only three areas of the peninsula could not solve the Crimean socioeconomic development problem.

Within the measures to implement the Resolution of the Plenum of the TsK KP(b)U “On the Agriculture Fostering Measures in the Postwar Period” the output of the industrial crops, fiber flax, tobacco, shag, hemp, rubber plants, hop, etc., was to be surpassed between 1948 and 1949[4, s. 155]. It was also envisaged to increase the cotton planting acreage in Kherson, Mykolaiv, Odesa, and Zaporizzhia Oblasts by 16,000 ha in 1947. It was also planned to plant and repair the vineyards in the prewar scope between 1947 and 1949. Planned was to also use farm households for viticulture and orchards and berry fields were to be set out[4, s. 156-157]. Hence, the southern areas were to play the key role in implementing those development plans for industrial sectors of agriculture in UkrSSR, and some organizational measures to provide conditions for developing those sectors were taken in the first five-year period after the end of World War II. The UkrSSR Ministry of Agriculture actively extended the experience of taking such measures to Crimean Oblast after its transfer in 1954.

In the late 1940s, the Soviet leaders make attempts to promote, in the southern areas of Ukraine, the growing of crops that were unusual for such regions. For instance, First Secretary of the TsK KP(b)U N. Khrushchev raised the question of mastering the growing of such crops as cotton and citrus plants in the southern areas of the UkrSSR at the meeting on December 18, 1948. In addition to those rather exotic crops, there were plans to develop rice growing in large river valleys. That crop required systematic and reliable irrigation, and therefore, the main focus in the rice growing development was made on its cultivation in the full-flowing river valleys[5, s. 140]. The attempts to cultivate cotton plant in the southern areas of the UkrSSR and northern areas of the Crimea made it clear that growing of that crop with a possibility to obtain high yields is impossible without a reliable irrigation system. However, the issue of cotton plant growing on all suitable territories was of principle for the Soviet leaders in that period.
The motivations were primarily political, cotton plant was a strategic raw material, in particular, for the military industry. Also in that period, the USSR tried to compete with the USA on the global cotton market and had considerable prospects to take the lead. However, the USSR lacked time for intensive cotton farming development, and hence, the stake was put on extensive development, that is, on all territories suitable for growing that crop, and even the lowest yield was deemed fit.

At the meeting held by the TsK KP(b)U First Secretary on December 18, 1948, dedicated to cotton, herb, and citrus plant growing, N. Khrushchev brought up cotton farming as the first item. As the main problem in development of that sector, he pointed out the necessity to cultivate cotton on non-irrigated lands and told that the USA already had such experience at that time[6, s. 1]. The US experience was taken as model rightly, because the USSR entered the competition with that leading Western country in that period for not only strategic military reasons but political as well to demonstrate the advantages of the Soviet system globally. Later, when the construction of the South Ukrainian and North Crimean canals for cotton cultivation conditions to be provided in the Ukraine’s southern areas and Crimea’s northern areas was rolled out since 1950, it was stressed that such projects were not yet implemented in either Europe or America. Accordingly, the reclamation of lands for cotton plant, which were non-irrigated, was to evidence the USSR’s ability to compete with the West in that area and introduce competition on the cotton market for the USA. Notably, the reason was that the US domination on the cotton market was a weighty strategic advantage in the global economy.

N. Khrushchev pointed out that cotton was already cultivated in the UkrSSR; however, collective farmers and collective farms failed to pay due attention to that sector because of its low crop yield and poor quality of the crops obtained, thus resulting low payment for cotton. In the course of the meeting, the experimental station in Kherson Oblast was instructed to breed short duration cotton varieties that would enable to fit in the number of warm days for obtaining the crop[6, s. 2]. Cotton was cultivated in Ukraine even before the war, and N. Khrushchev pointed out that the output of that crop on Ukrainian lands was low. He stressed that where the cotton crop was sown on 200,000 ha
in 1937 and 1938, the yield was five to six point five hundred kilograms per hectare. As the target, N. Khrushchev set that the output should be at seven to eight hundred kilograms per hectare, especially in the traditional districts cotton cultivation, Skadovsk, Hola Prystan, and others. Therefore, it was Kherson Oblast that he referred to. Moreover, such task was based on comparison with the output in the USA (six hundred kilograms per hectare) and India (three hundred kilograms per hectare)[6, s. 3-4]. In particular, it was suggested to give up on bringing the cotton seeds into the UkrSSR from the Central Asia and cultivate the seeds locally, that is, all crop acreage to be deemed crop seeding-down[6, s. 7]. Hence, the cotton cultivation in Ukraine was planned for a long term. Any yield higher than that in the USA, India, and Argentine was noted as the main motivating aspect in the cotton farming development in Ukraine. However, the cotton yield in Ukraine was almost three times lower than in the Central Asia. Obviously, the fact that in the USA and other countries grown were high grades of such crop that were more liquid on the global market was the main obstacle to cotton farming development in Ukraine, and that aspect was stated in the verbatim record of the meeting. However, as soon as in 1954, the Academy of Sciences of the UkrSSR put the feasibility of cotton cultivation in the southern oblasts of Ukraine in doubt[7, s. 10].

In the course of the meeting, the emphasis was placed on the issue of ensuring the use of machines for cotton cultivation. No such machines were available in Ukraine, and therefore, N. Khrushchev instructed L. Melnykov to organize the production of the required equipment in the UkrSSR[6, s. 21]. In other words, in that period when the programs of agrarian development of the southern areas of the UkrSSR were rolled out, some improvements in the farming equipment production structure occurred. Actually, the UkrSSR leaders assumes the functions of autonomous production resource management within Ukraine to ensure the implementation of their own initiatives. The previous initiatives of L. Kaganovich while the TsK KP(b)U First Secretary, acting together with N. Khrushchev, who was the Chairman of the Council of Ministers of the UkrSSR, related to production of the materials, required for developing the Ukrainian energy sector, at factories of union subordination (to the USSR sectoral ministries) located in the UkrSSR were the example[8, s. 83]. Similarly to the agrarian development
of the Crimea after the peninsula was transferred to the UkrSSR in 1954, the issue regarding the provision of machinery to the peninsula’s agriculture arises in Ukraine[9, s. 62], which fact testified to the production workload and specialization in Ukraine, and the leaders of the republic were to solve those problems promptly.

At the same time, the issue regarding the prospects of cultivating the subtropical crops and the necessity to study a possibility to grow lemons, mandarins, and tea was raised at the meeting held by the TsK KP(b)U Secretary. N. Khrushchev also raised the issue of studying a possibility to grow eucalyptus[6, s. 24]. In fact, growing of such crops was treated as exotics that required experimentation; however, such item at a TsK KP(b)U meeting shows that the postwar south of Ukraine became a powerful experimental facility for the agro-industrial sector development.

It was obvious to the Late-Stalin period’s USSR leadership that an irrigation system should be constructed for the agrarian restoration in the Ukraine’s southern areas and the Crimean Peninsula. Construction of a reliable irrigation system was to ensure the elimination of the high farm management risk in that region due to low moisture level. The irrigation system, according to the plans under development, was bound to cover the territory of the southern areas of the UkrSSR and the northern areas of the Crimea. It was the growing of cotton plant that induced the transfer from theoretical irrigation concepts to specific calculations.

The irrigation system construction was to become the beginning of population of the regions that were hardly suitable for farming due to the dry climate. At the same time, an opportunity to solve the problem of populating the Crimean Peninsula, which was a pressing issue after the indigenous people were displaced (the Crimean Tatars, Bulgarians, and Greeks), arose. Representatives of those peoples were mainly employed in the Crimean agriculture and were growing the crops that were unique and typical of only that region. For that reason, the restoration of their farming was important to the Soviet leaders, and hence, the urgent need for populating the Crimea with people capable for farming, that is, for carrying out organized relocation of agricultural people arose.

It was typical for the Late-Stalin period’s USSR to implement large-scale construction projects most of which required a large number of unskilled labor because of ample
opportunities to enlist the same from collective farms. Such approach proved to be impossible for the Crimea because of the difficult demographic situation on the peninsula. The demographic situation in the southern areas of the UkrSSR was marginally better; however, it was still worse than in Zaporizzhia and Dnipropetrovsk Oblasts with the most optimal ratio between industrial and agricultural development. In fact, the Soviet leaders used the principle of territorial expansion from more economically developed regions southwards as they implemented the projects of irrigation of the Ukraine’s southern areas and Crimea’s northern areas. Hence, such economic development expansion began from Trans-Dnieper area owing to development of the electrical energy sector and transportation logistics in the region. When the construction of the South Ukrainian and the North Crimean canals was rolled out, Zaporizzhia became the coordination center for that construction, and operation meetings were held there. Local reservoirs were constructed in the Crimea at the same time, however, their main purpose was to supply water to cities rather than to establish the irrigation system. Prevalence of urban over rural population was typical of the Crimea in that period, in particular, urban population in Crimean Oblast was 453,437 thousand persons (except for Sevastopol) as at January 1, 1957, while the total Crimean population (except for Sevastopol) was 845,007 thousand persons[10, s. 50]. That is, urban population was by 61,867 thousand persons more, and urban population in Sevastopol totaled 128,459 thousand persons. Overpopulation and weak rural facilities of the cities posed difficulties in their supply. The Crimean cities had no reliable agrarian base, and therefore, its establishment was a matter of principle for Soviet leaders in order to provide conditions for normal socioeconomic development of the peninsula. It was impossible to establish any agrarian base for the cities without implementation of the area irrigation programs. At the same time, the issue of providing fresh water to industrial facilities in Kerch was urgent, and it could only be provided by supplying the water from mainland Ukraine. Hence, the use of water resources for irrigation was vital for the Crimea as an industrial and urbanized region with a strong military base. Similarly, the program of establishing the agrarian base for big industrial cities was introduced in the UkrSSR (without the Crimea at the time) back in 1947. Kherson, Mykolaiv, and Odesa were
designated as such cities in the southern regions of the UkrSSR. Kherson was also planned as the center of agrarian product processing and a large logistic center which should play a key role in Crimean connection with the mainland.

Ensuring the energy strategy implementation was the key objective for the USSR leadership with respect to Ukraine after World War II. However, the irrigation system construction for the purposes of agricultural development acquired a paramount importance in the context of the energy sector development program implementation as rehabilitation was under way in the southern regions of the UkrSSR. Receiving a large quantity of the resources supplied by agro-industrial complex became of vital political importance in that period’s USSR. In the first turn, that was the attainment of grain croppage for grain diplomacy with respect to European and Asian countries. The Soviet Union tried to form its own sphere of influence and used the factor of food supply to the countries under its influence for that purpose. Therefore, the country mobilized the food supplies by carrying out the so-called grain deliveries. Such policy entailed manufactured famines in the UkrSSR in 1947 because the “grain delivery” rates were set too high without regard to low crop yield in the Ukraine’s southern areas caused by dry climate. Therefore, in the same 1947, J. Stalin initiated preliminary estimations of the irrigation system construction and agricultural restoration in the southern areas of the UkrSSR. Hence, the plans of agrarian project implementation in the southern areas of the UkrSSR resulted in adjustments of the energy strategy in Ukraine. Concerning the southern areas, that strategy was adjusted for the irrigation system construction and incorporated the railway logistics development as a weighty factor. For instance, the draft Resolution “On Irrigation of the South Ukraine’s Arid Lands” was prepared as soon as in 1948 considering the recommendations laid down in N. Khrushchev’s memorandum to J. Stalin in 1947. However, the draft resolution was recalled in the same year by the UkrSSR Council of Ministers and the TsK KP(b)U because of substantial adjustments that became necessary due to discovery of the brown coal deposits in the area to be irrigated. Accordingly, the issue of rejecting the construction of power plants to be supplied with fuel brought from offsite was raised.
In his 1947 recommendations, N. Khrushchev pointed out the feasibility of constructing larger power-generating facilities in Donbass based on local hard coal together with power supply lines to the consumption, that is, the irrigated areas. N. Khrushchev’s rationale was that the cost of supplying the coal by rail from Donbass to its consumption centers in the southern areas of the UkrSSR were considerable higher than losses of electricity if delivered through high-voltage transmission lines[11, s. 565]. In addition, the railway logistics in the southern regains of the UkrSSR in first years after World War II experienced a very difficult situation. The USSR State Planning Committee studied the matter of railway construction, including in Kherson Oblast, in particular, the spur from Chkalovo to Novo-Sirohozy of 25 km in length, that was the suggestion of the UkrSSR Council of Ministers made to Deputy Chairman of the USSR Council of Ministers V. Molotov. At the same time, the Head of Kherson Oblast Executive Committee and the First Secretary of the Oblast KP(b)U Committee sent their letters to the USSR Council of Ministers about construction of the line from the station Yanivka to Kakhovka[12, s. 73]. Hence, the railway transport system development in Kherson Oblast becomes vitally important as soon as in 1948; besides, N. Khrushchev personally attached special importance to that matter and construction of the Kakhovka Hydroelectric Station, which he mentioned in his memo to J. Stalin in 1947 regarding energy supply to the southern regains of the UkrSSR, was among the reasons behind such interest[11, s. 565]. In particular, pointed out in the memorandum from the First Secretary of Kherson Oblast KP(b)U Committee to the Chairman of the UkrSSR Council of Ministers and the TsK KP(b)U First Secretary was the necessity of functioning, subordinated to the Stalin Railway, of a narrow-gauge spur that would run through Henichesk, Syvash, Novotroitsk, and partially Kakhovka districts; also mentioned was the presence of the broad gauge spur from the station Chkalov running through Chaplynka District to the station Kalanchak. The Oblast Committee Secretary wrote because the army men began to disassemble the narrow-gauge spur and already dismantled 16 km of it[13, s. 2]. As was also stated in that letter that, Kherson Oblast had very short length of the railways that could connect the oblast center with its districts, and therefore, he requested that the narrow-gauge spur be extended to the station
Kahovka[13, s. 3]. In the same period, Kakhovka acquired a great importance in Kherson Oblast, which fact was mentioned in the letter, in particular, that the volume of transportation using it, considering the increased grain, industrial, and oil crop planting areas with crop yield to reach 62 thousand tonnes in 1949. The necessity to complete the narrow-gauge spur branch before 1949 harvest time was stressed in the letter, and it was pointed out that that the Executive Committee of the Kherson Oblast Workers’ Council was prepared to cooperate in all respect in completion of the railway spur[13, s. 3]. The only way of cooperation in that instance was through allocating the labor resources out of collective farm workers and providing local construction materials. As soon as on February 5 Oblast Committee Secretary H. Hryshko applied to new TsK KP(b)U First Secretary L. Melnykov for assistance in constructing the railway section to the stations Nova Oleksiivka and Kakhovka. He explained the necessity to complete that construction, in particular, by increased cotton areas in Kherson Oblast[14, s. 5]. Moreover, the railway was to be extended to the stations tied to Dnieper river ports. Actually, reference was made to railway development tied to development of Dnieper water transportation. The logic of the logistic system development in the southern areas of the UkrSSR in that period will be developed thereafter as implementation of the project of constructing the South Ukrainian and North Crimean canals. Implementation of that projects also involved the gaining of the objective to provide conditions for shipping traffic development, and moreover, not only of end-to-end traffic in the Dnieper corridor to the Black Sea, but also connected with the river system in the European portion of the USSR through the Sea of Azov and with establishment of the Dnieper-Azov deep-water inland waterway. In addition, the importance of that route should grow as the connection of the Dnieper with the Baltic Sea was to be constructed[15, s. 104-105]. Therefore, in accordance with the development plans, Kherson Oblast was to become a logistic hub of a more global scale than within the UkrSSR; besides, the growth in the oblast’s logistical importance by implementation of large-scale agrarian programs in it was to provide conditions for transport link of the Crimean Peninsula with other areas of the USSR’s European portion that were economically important for its development.
The matter of coal delivery to irrigation and industrial concentration centers in the southern areas of the UkrSSR also got held up on low railroad capacity given an extremely high traffic volume. Active development of the railway network in the southern areas of the UkrSSR and measures to increase in its capacity were only rolled out with commencement of the active phase of constructing the South Ukrainian and North Crimean canals since 1951[16, s. 87]. The planned construction of the system of irrigating the Ukraine’s southern areas and the Kakhovka Hydroelectric Station radically changed the importance of Kherson. In the future, that city was to become a powerful logistic center, and Kakhovka was to be linked with it by railway. In fact, the Kakhovka Hydroelectric Station construction, which was rolled out actively in 1951, was to be supplied through the stations Zaporizzhia and Kherson. In its turn, Kherson, as of 1957, shortly before drafting of the plan of energy sector development in the southern areas of the UkrSSR and the irrigation system construction for implementation of large-scale agrarian projects, was a city with low electricity consumption unlike other big cities in the southern region, Mykolaiv and Odesa, which experienced short supply of electricity[17, s. 443]. Therefore, Kherson, once the Kakhovka Hydroelectric Station construction began, became a powerful energy center with excess energy resources and, accordingly, could count on construction of industrial facilities in it, increase in its logistical importance, etc. The KP(b)U Oblast Committee worked actively towards the city’s industrial development by lobbying the construction of an oil processing plant[18, s. 7] and agricultural produce processing facilities. Accordingly, the irrigation system establishment and implementation of large-scale agrarian projects was expected to transform the arid Kherson Oblast, adjacent to the Crimean Peninsula, into a promising and dynamic region.

Once the brown coal deposits were discovered in Zaporizzhia Oblast, the plans of energy supply to the Ukraine’s southern regions were adjusted for construction of brown coal-fired heat power plants in the irrigation system development and industrial demand centers from which high-voltage transmission lines should be built. In addition, the amended draft Resolution of the USSR Council of Ministers “On Irrigation of the South Ukraine’s Arid Lands”, envisaged maximum use of the water-power resources of the
rivers in the southern areas of the UkrSSR, namely, the Dnieper, Southern Bug, and Dniester by constructing of hydroelectric stations thereon[19, s. 4]. The final provision of the explanatory note to the draft on energy sector development in the southern areas of the UkrSSR points to certain boundary delimitation of the energy and hydro-construction area by the rivers on which the hydroelectric station construction projects were to be implemented. Such localization already involved the provision of conditions for establishing the region’s self-sustainability in the course of its supply with the resources necessary for implementing its development strategy. Actually, the region held promise to become independent in terms of resourcing from the adjacent powerful industrial Dnieper River areas. The economy management system in the Late-Stalin period involved sector-based approach to management with concentration of resources on the highest management level and their vertical mobilization; however, maximum possible economical use of the resources, reduction in project prime costs, and maximum use of local resources was promoted in that system through initiative from the top. The use of local resources in this context should be understood as the resources that were not exploited by enterprises of Union-level subordination. In those settings, initiatives related to maximized efficiency of resource supply for project execution were implemented in the regions with maximum local resource mobilization, and thus, construction projects and USSR republics, UkrSSR in particular, switched to self-sustainment. For instance, Chairman of the Council of Ministers D. Korotchenko often actively lobbied the matters of construction material plants where an urgent need for their products existed[20, s. 82]. For that reason, the region within the water resource boundaries formed as having the conditions for self-supply with resources by their internal mobilization created. Considering that the issue at hand was a Soviet Union-level project, implemented under the USSR Council of Ministers’ resolution, initiatives for utilization of resources for its execution within their maximum accessibility were only supported and welcomed. Therefore, in fact, with active promotion of the irrigation system construction projects, Kherson Oblast becomes more autonomous in economic terms from Zaporizzhia Oblast and the Dnieper River industrial region generally. Hence, as a result, preconditions for active industrial development expansion southwards, that is, the Crimean Peninsula, were
created. In the preamble of the USSR Council of Ministers’ resolution, proposed as of January 17, 2948, the arid nature of the Ukraine’s southern areas was mentioned, however, it was stated that there is a possibility to have high yields in crop farming if sufficient humidity is provided and given the warm climate, and this, in its turn, was to set the base for livestock farming, horticulture, and viticulture[21, s. 6]. That provision in the draft resolution preamble quite expressly reveal the strategy of agrarian development the Ukraine’s southern areas in those years. Unlike the UkrSSR territory, the Crimea could not ensure the water resource supply in the appropriate volume then, and viticulture developed in the peninsula’s coastal areas where conditions were favorable mostly for vineyard development in a resource-effective manner. The real high productivity of farming in the southern areas of the UkrSSR and the Crimea could only be ensured if the appropriate plant-growing base was created, because plant cultivation possibilities enabled to mitigate risks for industrial crop cultivation and stock-raising development considerably. Hence, the southern areas of the UkrSSR, namely Izmail, Odesa, Mykolaiv, Kherson, and Zaporizhzhia oblasts, were expected to become such base if irrigated. Viticulture and horticulture development was of quite high importance for the USSR, given the plans to increase the output of wine products. Sometime later N. Khrushchev would try to implement a strategy of switching the use of spirits in the USSR from vodka to wine.

In total, under the draft resolution of 1940, it was proposed to irrigate the areas of 455.2 thousand ha, such areas were much smaller than in the estimates that L. Kaganovich submitted to J. Stalin in 1947. As soon as in the draft resolution of the USSR Council of Ministers and TsK VKP(b) “On Construction of Kakhovka Hydroelectric Station and the South Ukrainian and North Crimean Canals and the System of Irrigation of the Southern Areas of Ukraine and Northern Areas of the Crimea”, dated September 20, 1950, considerably larger areas, 1,200 thousand ha in the Ukraine’s southern areas and 300 thousand ha in the Crimea’s northern areas were envisaged[22, s. 78]. It should also be noted that the later draft, approved in 1950, unlike the 1948 draft, provided for an extremely large-scale construction, absorbing whole reservoirs, and did not account for artesian water potential at all. The draft of 1948 provided for irrigating 30 thousand ha by
using artesian water out of the overall tract of 255 thousand ha in Kherson Oblast[21, s. 7] in particular. In other words, the draft USSR Council of Ministers’ resolution as proposed by N. Khrushchev envisaged the maximum use of regional approach to implementation of even very large-scale projects. As may further be seen from the draft resolution, that large-scale plan was to be implemented by mobilization of labor resource from collective farms in the construction area locally. That is, regionalization of local resource management was to take place. The draft resolution adopted on September 20, 1950 envisaged a global mobilization of labor and physical resources.

Two project implementation options were considered in the course of planning the construction of the irrigation system in the Ukraine’s southern areas and Crimea’s northern areas. Considered were the gravity and pump options of water supply to the irrigation system. Actually, the gravity option of water supply to the irrigation system under construction won when it was decided to approve the design assignment owing to its technical and technological support simplicity, however, with the use of a large number of unskilled workforce. That option was doubted in 1952 through the Academician S. Zhuk’s initiative and proposal to switch to the pump option because the latter did not require so large volume of earthwork than the gravity option. The pump option involved abandoning the construction of the South Ukrainian Canal and construction of machine stations that were to pump water from the Kakhovka Reservoir. The hydro-construction projects in the region of the Ukraine’s southern areas and Crimea’s northern areas were of a large scale encompassing considerable territorial areas and were expected to attain quite a number of objectives. For instance, the construction of the South Ukrainian and North Crimean canals, launched under the resolution of the TsK VKP(b) and USSR Council of Ministers “On Construction of Kakhovka Hydroelectric Station and the South Ukrainian and North Crimean Canals and the System of Irrigation of the Southern Areas of Ukraine and Northern Areas of the Crimea”, dated September 20, 1950, as planned, was to solve the problem of agricultural land irrigation, generation of electricity, and Dnieper navigation. In addition, considering the experience of World War II, construction of a powerful water main was of military and strategic relevance as it created an additional controlled water obstacle. Such direction of linking the water
resources in the European portion of the USSR was developed by the UkrSSR Academy of Sciences and it initiated the connection of the Black Sea and Sea of Azov water area with the Baltic Sea and of the Dnieper, Don, and Volga in 1954. To that end, hydro-construction to link the water resources along both the meridian (South to North, based on the Dnieper River) and the parallel, in particular, construction of the Dnieper-Southern Bug canal, was planned.

The matter of mobilizing the labor resources was reviewed at the meeting in the TsK KP(b)U, it was planned to use them, and members of the ruling party and the young communist league, to be enlisted from throughout the UkrSSR on the organizational recruitment principle, were deemed to be their sources; also planned was to use the resources from other republics[23, s. 6]. Therefore, Stalin’s gigantomania is in clear evidence from implementation of that project. However, the course of construction of the South Ukrainian and North Crimean canals and the system of irrigation of the Ukraine’s southern areas and Crimea’s northern areas witnessed more effective use of exactly the staffing approach underlying the labor resource provision under the resolution of the UkrSSR Council of Ministers in 1948; measures to mobilize labor resources were taken by the KP(b)U entities, and such approach proved to be successful as pointed out by the management of Ukrvodbud Main Department of the USSR Ministry of Cotton Farming[24, s. 131]. In other words, the principle of narrower territorial base for labor resource mobilization together with reinforced organizational structures carrying out the same was a key success factor. At the same time, low population level in the southern regions of the UkrSSR should be noted. That problem became evident as soon as in 1949, when the program of cotton farming development in the Ukraine’s southern region was launched. To solve that problem, the party ruling in the UkrSSR rolled out the program of relocating the population into the areas of planned cotton farming development. The relocation policy was to set the base for labor resource mobilization in the region, and therefore, the labor mix for construction of the South Ukrainian and North Crimean canals, mobilized from Western oblasts of Ukraine, was actual continuation of the relocation policy.
However, as the South Ukrainian canal construction was discontinued, and the project closed after J. Stalin deceased, local hydro-construction matters became more relevant. However, the implementation of local hydro-construction projects was successful in the southern areas of the UkrSSR, in particular, of Upper Ingulets and Lower Ingulets irrigation systems. Those local irrigation systems were to solve the problem of refining new hydraulic and agricultural technologies and train a sufficient number of irrigation system specialists, primarily management and support staff from among them[25, s. 33]. For that reason, once the South Ukrainian canal construction was halted, the hydro-construction operations concentrated on the territory of the southern areas of the UkrSSR.

Since 1953, the regional economy development planning approach began in the USSR came into more active use thus replacing the sectoral approach that was actively employed in the Stalin’s period and, within the vertically integrated command and administrative system, acquired hypertrophic forms of total resource mobilization for implementing specific sectoral projects, and the use of such resources often was uneconomical and inefficient. Such specificity of the Late-Stalin period’s Soviet economy explains the tendency to implement large-scale projects that were to attain large sets of objectives. The construction of the South Ukrainian and North Crimean canals and the system of irrigating the Ukraine’s southern areas and Crimean northern areas was also a typical example of such project. As they implemented such projects, their initiators and implementing parties were hardly concerned about their environmental impact, as their main objective was to achieve instant outcome with minimum use of high-technology resources. For that reason, used was mostly manual low-skilled labor and technologies that required accessible physical resources with the use if unskilled labor in large volumes. Therefore, the slogan that vehicles and machinery must be used for canal construction to maximum extent and wherever possible was almost did not apply in practice.

Implementation of the large-scale irrigation construction projects involved large scopes of constructing the facilities that are associated with hydraulic structures. Primarily, those were dwelling houses, infrastructure facilities, public facilities, etc.
Hence, it promoted an active development of building materials in the canal construction area and construction of plants to manufacture them. Accordingly, the Ukraine’s southern areas became the building material production center in the Black Sea region. Even before the South Ukrainian Canal construction began, in 1949, it was planned to start the construction of a transportation canal, based on the Dnieper and the Black and Azov seas, for supplying the shell stone, in particular, to the Crimea. In 1949, N. Khrushchev initiated the approval of the USSR Council of Ministers’ resolution, dated April 4, 1949, on developing the mechanized shell stone excavation at Buldynka deposit located on the coast of the Adzhalyk estuary that debouched into the Black Sea. It was planned to have the output of 40 thousand cubic meters of shell stone in 1949 and increase its volume to 80 thousand cubic meters thereafter. Development of that plant was planned counting on future shell stone supply by water to meet the needs of construction sites in Mykolaiv, Dnipropetrovsk, Kherson, and the Crimea, actually encompassing the coasts of the Black Sea and Sea of Azov and the Dnieper watercourse. The water was much cheaper supply option as compared with railway and road transport, and that was actually the rationale behind the development and mechanization of the deposit, same as its favorable location near the delivery waterway[26, s. 149]. To ensure the delivery by water, it was envisaged to make a channel in the dike separating the estuary from the Black Sea. To have that canal built, N. Khrushchev proposed to order that the Ministry for Construction of Military and Naval Facilities make such canal by the second quarter of 1950. Ordering exactly that Ministry was explained by the fact that it was to become the main shell stone customer. Hence, in this instance, attention should be paid to the approach within the command and administrative system whereby the so-called “stakeholder” agencies were involved in implementation of management decisions, and resolutions manually defined the areas for ministries to utilize any funds that were available to them. Notably, the basic construction in the southern areas of the UkrSSR in that period was under control of the military establishment, and hence, that fact necessitated the economic development of such territories for prospective military infrastructure development. In that period, the Black Sea area becomes strategically important for the USSR, given the reinforced positions of the USA in the Black Sea.
together with its strengthened economic and military influence in Turkey and Greece. Therefore, the economic development of the Ukraine’s southern areas and the Crimean Peninsula was conditioned by the changes in the geostrategic situation. In addition to canal construction for exit to the sea, N. Khrushchev asked for construction of the high-voltage transmission line from Odesa to the Buldynka Plant of 36 km in length to provide the power base to develop that facility. The responsibility was to be placed on the USSR Ministry of Power Plants[26, s. 150].

In parallel with the irrigation system construction, the project of forest belt planting to protect fields from soil aeolation was implemented in the Ukraine’s southern areas. In that way, the integral economic complex for excavation and production of building materials, focused on serving the large-scale construction projects for economic development of the region, was established on the territorial basis of the Ukraine’s southern areas and the northern areas.

The range of ecological problems in the context of developing the economy complex in the southern areas of Ukraine and the Crimea should be noted specifically. In the first turn, the problem of flooding the large areas by making the reservoirs in the course of power plant construction is urgent. In that way, considerable areas of land were taken out of turnover. The issue of environmental implication was not pressing as the economic development was planned in that period. For the most part, maximum possible exploitation of available resources was calculated. The dry climate and the weed infestation and salinity of considerable areas caused the impossibility to [use] extremely large areas by using the existing agricultural technologies, which areas did not produce, as calculated in the memorandum submitted by L. Kaganovich in 1947, the grain and vegetable crop yield results by irrigation. In addition, population of the areas unusable for that purpose was treated as a socioeconomic outcome of implementing the irrigation and energy supply projects. Therefore, in fact, the flooding of lands by hydro-construction was regarded as necessary measures to include large areas of land in economic turnover. Besides, as an economic effect to compensate for losses from flooding the considerable areas of land, the prospects of fisheries sector development in the new reservoirs forming from the implementation of hydro-construction projects were studied.
Hence, the formation of the uniform ecological and economic complex based in the Ukraine’s southern areas and the Crimean Peninsula’s territories was actively rolled out after the end of World War II as a result of implementing the large-scale agrarian projects in the region. For the purposes of those agrarian programs, the project of irrigating the lands in the southern areas of the UkrSSR and the northern areas of the Crimea was rolled out, and the plans of energy strategy implementation, logistical and industrial development, and demographic policy operation in the region were adjusted. Hence, the proactive development of the southern areas of the UkrSSR with establishment of the prospect to extend the economic development to the Crimean Peninsula enabled the republic’s leadership to make independent economic decisions, however having them authorized by the Union-level government. In fact, the UkrSSR leadership, as evidenced with their business correspondence with the Union-level government, wielded the function of accounting the resources in Ukraine and calculating the possibilities of their efficient use. However, the problem of sustainable use of natural resources was not pressing in that period, as the economic development was based on maximum use of natural and labor resources by using the most accessible methods. Therefore, inefficient flooding of land areas in the course of energy sector construction and hydro-construction and cultivation of plants that were not typical of the climatic conditions in the south Ukrainian and Crimean region could often be observed. However, the regional approach to planning the economic development of the areas, which came into active use in the Ukraine’s southern areas and the Crimea’s northern areas as soon as in the second half of 1940s for conservation and more efficient use of resources, opened the way to a more balanced economic development of the region with its ecosystem.

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