

Land Melioration in Belarusian Polesia as a Modernization Factor in the Soviet Periphery

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SUMMARY

For centuries, Southern Belarus was notorious in neighboring regions for its impassable marshland landscapes. In the course of historical and political reforms and reorganization, this outlying borderland experienced lively changes of rulership and government. All attempts made by the Russians, Germans and Poles to make the area easier to access and traverse for the purposes of stimulating the economy, exploiting natural resources or developing tourism ended in only modest success. After the October Revolution, the draining of the swamps was proclaimed by the new Soviet powers to be a top agricultural priority. However, the project could only be partially realized in the early decades of the Soviet Union due to industrialization, which significantly depleted state resources.

With Leonid Brezhnev's assumption of power in 1964, the increase of land yield in the race against the USA was seen as an indicator of the potency of Soviet state power. For this purpose, vast state resources were made available. A side effect of swampland drainage and the improvement of soil conditions was an initiative to modernize the rural region, so, with the establishment of large state-owned agricultural enterprises came the expansion and development of infrastructure. Roads were laid across the countryside and modern houses, schools and kindergartens were built. Thus, after 45 years of Soviet power, the rural population was also able to enjoy the benefits of modern achievements.

Gradually, Polesia started making the headlines. Films were made and countless newspaper articles written. With the expansion of the airport near the transforming city of Pinsk, a direct air connection could be established between the region and the Belarusian capital of Minsk. This made it possible to hold both national and international conferences in Polesia.

However, land melioration proved to be an enormous burden on the natural environment. Draining the swampland deprived many animal species of their natural habitats. Many areas that had been drained were also not suitable for melioration. This reduced the economic success of the initiative considerably and saw the focus shift increasingly to the social aspects.

KEYWORDS: Belarus' Modernization, Soviet Periphery, Land Melioration, Polesia



In the foreground stand four young people, two men and two women. One of the men is playing the accordion. His vest and peaked cap show that he comes from a village. The young man next to him is wearing a beret and a shirt, symbolizing that he belongs to the educated class. Both women wear jewelry and festive clothing. One with a headscarf resembles a farm worker, while the other holds the book *V Polesskoj glushi* (In the Depths of Polesia) by the Belarusian author Iakub Kolas. The four figures are standing on a hill, which gives the viewer a panoramic outlook over the vast expanses of the Polesian landscape. In the valley we can see a modern settlement, at the center of which stands an arts center or perhaps an administrative building. In front of the building are two buses, around which crowds of people are teeming. Across the intersection stand modern single-family houses, all built in a uniform design. A car drives along the main street. Pylons holding overhead powerlines tower above the roofs of the houses. One of the roads turns off into a small forest beyond which a river is flowing. A little further off, there is a modern farm that appears, in its design and with its green, cultivated pastures, to be a dairy farm. Behind the farm, fields stretch to the horizon, creating the feeling that this cultivated land goes on forever. In the middle of the fields stands a factory with a large smoking chimney where the grass is being processed into feed meal. The peaceful sky is adorned with two white storks flying over the township. The illustration, entitled “In the Polesian ‘Wilderness’” (*U paleskai “glushy”*), was published in the August 1968 issue¹ of the monthly Soviet Belarusian satirical magazine *Vozhyk* (Little Hedgehog). It is a picture that radiates joy and serenity and gives the impression of a happy society that has created an oasis in the midst of the modern world, complete with all the amenities civilization has to offer. There is no trace here of the famous—and infamous—“Polesian wilderness” with its dense forests and expanses of swampland, even though in late May 1966, only a short time before the illustration was commissioned, the Secretary General of the CPSU, Leonid Brezhnev, had personally announced a state land-melioration program with a view to accelerating the development of the Soviet agricultural sector. Specifically, the Central Committee of the CPSU decided that the region’s soil fertility was to be significantly increased over the following ten years through irrigation and drainage, as well as electrification, mechanization and chemicalization in order to make agricultural production less dependent on weather conditions.² For the Soviet Union, and especially Belarusian Polesia in the south of the Belarusian Soviet Socialist Republic (BSSR), this was a momentous innovation and one of the first large-scale construction projects under the Brezhnev administration was created.

An in-depth scientific debate around the melioration works in Polesia took place in the 1970s and 1980s, when the initial mistakes that occurred in the

¹ Cf. *Vozhyk* (1968), 8, p. 5.

² *Resheniia partii i pravitel'stva po sel'skomu khoziastvu (1965-1974)* [Party and Governmental Resolutions on Agriculture (1965-1974)], Moskva 1975, pp. 125 ff.

implementation of the drainage plans became apparent and raised numerous scientific questions. These were examined in particular in the series entitled “Questions on Polesia,”³ which was published by the Academy of Sciences of the BSSR between 1972 and 1991. In addition, anthologies such as “The Melioration and Use of Drained Land”⁴ and “The Melioration of Wetlands”⁵ were produced, forming a point of contact for the scientific debate around “melioration”. However, these publications almost entirely ignored both the enormous environmental impact of melioration and the socio-economic components.

Against this background, this article will pursue the question of whether the land melioration in Belarusian Polesia, with its socio-economic and environmental components, led to a broad-based push for modernization. In the Soviet context, this meant, beyond the sociopolitical dimension, a quantifiable material-technical dimension—the considerable mobilization of human capabilities, scientific, technological, and economic resources.⁶ The relationship between the development of a rural infrastructure and the management of the natural environment should be problematized here. To what extent was the traditional way of life of the local population encroached upon? To what degree was the natural world compromised by the specifications of the state planners? Which alternatives were offered by the state? And were state measures to improve rural life accepted by the local population?

“Melioration” refers in the following to the complex system of agricultural and technical measures that were intended to improve water and soil resources as well as climatic conditions⁷ in order to bring about higher soil yields and thus more effective agriculture. Of all the common types of land melioration, the drainage works played a particularly prominent role for Polesia, with its numerous areas of swampland. The fertile layer of peat that reached the surface of the moors as a result ensured increased soil fertility and thus also an increased yield. In most cases, the draining of marshland was directly linked to population growth⁸, which necessitated new farmland and transport routes.

³ Cf. *Problemy Poles'ia 1-14 (1972-1991)*.

⁴ Cf. *Melioratsiia i ispol'zovanie osushennykh zemel'* [The Melioration and Use of Drained Land], Minsk 1967.

⁵ Vgl. *Melioratsiia pereuvlazhennykh zemel'* [The Melioration of Bogland], Minsk 1987.

⁶ VERNON V. ASPATURIAN: *Marxism and the Meanings of Modernization*, in: CHARLES GATI (ed.): *The Politics of Modernization in Eastern Europe: Testing the Soviet Model*, New York 1974, pp. 3-21, here p. 10.

⁷ *Entsyklapedyia pryrody Belarusi* [The Encyclopedia of the Nature of Belarus], vol. 3, Minsk 1984, p. 334.

⁸ Cf. DAVID BLACKBOURN: *Die Eroberung der Natur: Eine Geschichte der deutschen Landschaft*, München 2007, pp. 178 ff.

While the draining of marshland in Western Europe declined rapidly in the second half of the nineteenth century, large-scale melioration works to make new land available for use were only just beginning in Eastern Europe—aside from earlier experimental attempts by private individuals⁹ and the state. This development was due to declining agricultural productivity in the traditionally cultivated regions and the search for new fertile agricultural land.¹⁰ Regions in the governorates of north-west and western Russia were now considered.¹¹ Until then, the high percentage of swampland in these areas meant that they had remained largely undeveloped in terms of agriculture, but it also meant that they were potentially very fertile.

The First World War and the chaotic conditions following the October Revolution of 1917 put an end to these melioration efforts for the time being. After the Peace of Riga in 1927, the Belarusian and Polesian territory was split into an eastern and a western half and divided between the Soviet Republic and the Polish Republic respectively.¹² The success of the Polish government in the meliorative development of West Poland was modest at 140,000 hectares¹³ compared to 270,000 hectares¹⁴ in the BSSR. Particularly in the 1930s, as part of the collectivization of villages, Soviet authorities worked on continuing the drainage plans started during the tsarist era, albeit under different auspices. Undeveloped natural landscapes were to be put to use in service of the Soviet economy, both as a source of raw materials and as arable land.¹⁵ Increasingly, peripheral regions such as Polesia were considered for these purposes.

Accordingly, on 6 March 1941, a government resolution was published that made provisions for almost all of the marshland in the BSSR to be drained.¹⁶ Undertakings of this kind were based on an ideology of human domination over nature and the belief that nothing should be allowed to limit

⁹ Cf. A. BULAVKO: *Stranitsy istorii melioratsii v Belorussii* [The History of Melioration in Belarus], in: *Problemy Poles'ia* 14 (1991), pp. 226-236, here pp. 226-227.

¹⁰ JOSEF ZHILINSKII: *Ocherk rabot Zapadnoi ekspeditsii po osusheniiu bolot (1873-1898)* [A Brief Overview of the Swamp Drainage Works of the Western Expedition] (1873-1898), Sankt-Peterburg 1899, pp. 1 ff.

¹¹ For more detail cf. KATJA BRUISCH: *The State in the Swamps: Wetland Drainage as a Means of Territorialization in the Late Russian Empire*, in this issue.

¹² A. KOVALENIA (ed.): *Rizhskii mir v sud'be belorusskogo naroda 1921-1953gg.* [The Peace of Riga in the Fate of the Belarusian People 1921-1953], vol. 1, Minsk 2014, p. 7.

¹³ K. SUCHKOV, P. RAVOVOI, L. STYCHINSKII: *Melioratsiia zemel' Belarusi: Ocherki istorii* [The Melioration in Belarus: Historical Articles], vol. 1-2, Gorki 2010, vol. 1, p. 119.

¹⁴ *Ibidem*, p. 143.

¹⁵ KLAUS GESTWA: "Social" und "soul engineering" unter Stalin und Chruschtschow, 1928-1964, in: THOMAS ETZEMÜLLER (ed.): *Die Ordnung der Moderne: Social Engineering im 20. Jahrhundert*, Bielefeld 2009, pp. 241-278, here p. 243.

¹⁶ N. BORISEVICH: *Predislovie* [Introduction], in: *Problemy Poles'ia* 1 (1972), pp. 3-4.

or stand in the way of the transition from a socialist to a communist society. From this time on, nature was cast as the enemy of the Soviet citizen in propaganda and the natural world was only accepted in its essence when the state could make use of it.¹⁷ In addition to this, according to Marxist ideas, the land had no intrinsic value as a natural resource¹⁸, which meant that it could be used at will, regardless of any possible negative consequences. Hence, the Polesian marshlands were seen, on the one hand, as new agricultural land and, on the other, as an important source of peat, which was enormously valuable as fuel. The consequences of such a radical anthropogenic intervention into natural processes were never considered. However, the Second World War and the subsequent rebuilding phase in the immediate post-war period once again put an end to such large-scale initiatives.

The search for solutions to the urgent problems of the first post-war years prompted the Soviet government to resume planning for the agricultural development of peripheral regions and areas lagging behind in terms of agriculture. Some new plans were also initiated at this time. In 1954, just one year after Stalin's death, the first master plan for the drainage and development of land in Belarusian and Ukrainian Polesia was published, although the initial plans had already been commissioned in the late 1940s. It was decided that 3 million hectares of land would be meliorated, which was equivalent to about half of the territory of Belarusian Polesia.¹⁹ The new party leader, Nikita Khrushchev, was deeply convinced that nature—regardless of the respective natural conditions—should serve the needs of man wherever he considered it useful. In view of the lack of material, financial, and human resources, the expansion and development of new agricultural land was seen as the only way to increase yields quickly and cost-effectively without having to abandon extensive farming operations.

The melioration of the “land of un-startled birds” (*krai nepugannykh ptits*), as some remote areas of Polesia were called²⁰, was, however, to be carried out less in the interests of the local population than in the interests of the state. Under Khrushchev, the expansion of the infrastructure, the construction of modern farming towns and the modernization of agriculture were needed to achieve a sharp increase in agricultural production so that the USSR could catch up with and overtake the USA, at least in the areas of meat, butter and milk production. This vision was part of a peaceful competition proclaimed by the party leader in 1957. In complete contrast to this, however, was the decision to abandon cultivated pastures as allegedly useless agricultural land

¹⁷ KLAUS GESTWA: Die Stalinschen Großbauten des Kommunismus: Sowjetische Technik- und Umweltgeschichte, 1948-1967, München 2010, pp. 325-326.

¹⁸ Grundwissen Melioration, Berlin 1988, p. 12.

¹⁹ Skhema osusheniia i osvoeniia zemel' Polesskoi nizmennosti Belorusskoi i Ukrainiskoi SSR [The Scheme for the Draining and Development of Land in the Polesian Lowlands of the Belarusian and Ukrainian SSR], Minsk 1967, p. 6.

²⁰ Meliorator Poles'ia (1969), 131, p. 3.

in favor of plough-based cultivation, for example for potato farming. The fact that many areas of land proved unsuitable for arable farming led, within a very short time, to immense ecological problems. With the expansion of the melioration work and increasingly apparent problems, by the early 1960s it was already clear that it had been a miscalculation with far-reaching consequences to classify Polesia as a region with above-average natural water resources for which there was no need to introduce a regulated water supply.²¹ Expecting rapid success, the state leadership made a series of arbitrary decisions that resulted in a complete disparity between the proclaimed goals and the actual ubiquitous scarcity of resources, which, in turn, led to shortages of bread, meat, milk and butter. Following the poor harvest of 1963, the Soviet government was forced for the first time to import wheat from the West²², thus unofficially admitting its error after only six years.

Leonid Brezhnev, who rose to power in 1964 as a result of intrigue within the party leadership, saw the workers' and farmers' state he now led as a powerful global player, for which the agricultural sector traditionally served as an important indicator. Meanwhile, on the domestic front, rapid population growth posed new challenges for the state leadership. Between 1960 and 1970, the population rose from 208 million to 241 million.²³ In order to avoid, at all costs, a repeat of the civil unrest that broke out, in particular in southern Russia, in the face of food shortages in the early 1960s, causing deaths and injuries²⁴, the agricultural sector had to be radically reformed. Land melioration thus became, for the first time, one of the most important measures for increasing crop yields within the framework of the new agricultural policy, which aimed to increase agricultural production.²⁵

The fact that the land melioration work, which concerned both the irrigation of dry regions in Central Asia and the drainage of wetlands in the Baltic States, Belarus, Ukraine, Central Russia and the Far East, was financed from the state budget ensured the support of the leaders of the Union Republic. Due to the very limited resources and the fact that this was the largest state investment in agriculture to date, the regional leadership met all Moscow's demands.²⁶ At the same time, a process of increased centralization began: In

²¹ SUCHKOV/RAVOVOI/STYCHINSKII (as in footnote 13), vol. 1, p. 191.

²² LEONID PARFENOV: *Namedni: Nasha era 1961-1970* [Not Long Ago: Our Era 1961-1970], Moskva 2010, p. 89.

²³ *Naselenie SSSR* [The People of the USSR], Moskva 1990, p. 8.

²⁴ PARFENOV (as in footnote 22), pp. 52-53.

²⁵ MANFRED HILDERMEIER: *Geschichte der Sowjetunion 1917-1991: Entstehung und Niedergang des ersten sozialistischen Staates*, München 1998, p. 889.

²⁶ Cf. speech by Petr Masherov at the plenary assembly of the Central Committee of the CPSU on 1966-05-25, in: *Natsional'nyi arkhiv Respubliki Belarus'* (NARB) [National Archive of the Republic of Belarus], Masherov Petr Mironovich, f[ond] 528, op[is] 1, d[elo] 23, l[ist] 14.



Fig. 1: One of the few preserved traditional houses in the Polesian village of Kudrychy near Pinsk (July 2014). Photo: Artem Kouida

the affected areas, central administrations were established²⁷, which came under the direct control of the Moscow-based Ministry of Melioration and Water Management of the USSR, and were only partially accountable to the local ruling elites. In this context, Polesia was of particular interest as it was home to the largest intact swampland area in the world and would provide a kind of experimental base for Soviet agriculture and land melioration research. In addition, the results of the Zhilinskii Expedition²⁸ and subsequent drainage efforts served as a starting point for the melioration program.

However, the immense investments, which flowed from now on into the melioration works, did not just provide for the drainage of swampland, but also financed the development of regional and rural infrastructure, which was to take place alongside other, long-neglected modernization processes. The melioration work in Belarusian Polesia was declared a Union-wide Komsomol construction site in 1970²⁹ and attracted thousands of Komsomol members and student construction brigades from across the entire Soviet Union. Tens of thousands of melioration experts, planners, technicians, engineers, excavator drivers and representatives of many other professions joined the labor pool. New housing had to be urgently constructed in order to accommo-

²⁷ Cf. Resheniia partii (as in footnote 2), p. 140.

²⁸ For more detail cf. BRUISCH (as in footnote 11).

²⁹ S. KOSTIAN: Komsomol na “Belorusskoi tseline” [Komsomol on the “New Belarusian Territory”], in: *Gidrotehnika i Melioratsiia* (1976), 3, p. 40.

date them all. In Kalinkovichi, a town in eastern Polesia, an entire district was built, with apartment blocks, a kindergarten, a canteen, a dormitory and a service combine for the melioration workers and their families.³⁰ Many other towns also received a modern infrastructure as a result of the melioration initiative.

Now neighboring Polesian townships could be reached via paved roads and paths rather than only via waterways, as had previously been the case. This was achieved through an immense deployment of machinery and technology. In 1974 alone, 1,000 excavators, 800 bulldozers, around 2,000 tractors and 2,000 trucks were needed for the works in Polesia.³¹ New bus routes were also established and a regular flight service was set up between Pinsk and Minsk, which was constantly outgrown by demand.³² In the countryside, *sovkhosy* were built on meliorated land³³, some of which were to serve as models and experimental laboratories for the new agricultural policy. One of these was the “Malech” *sovkhos* located near Brest in the west of the BSSR. The straight, asphalt roads complete with street-lighting and the two or multi-storey prefabricated houses stood in stark contrast to the traditional wooden, thatch-roofed houses of the old-established population, which were to disappear over time in the course of state planning for settlement development in peripheral regions.³⁴ The infrastructure of the “Malech” *sovkhos* consisted of a large town center to house 2,000 people and a smaller center for 800 people. The new township was to replace the eleven smaller, existing settlements. It boasted an arts and leisure center with 600 seats, a kindergarten with 140 places, a school for 640 students, a sports complex, a commercial center, several service stores, a hotel and a number of five-storey prefabricated apartment blocks.³⁵ Depending on the size of the settlements, a music school, a cinema, a hospital, a restaurant and specialized stores could be added.³⁶ Telephone, electricity and gas lines were also laid so that the residents of such towns were optimally connected to the outside world by the standards of the

³⁰ Meliorator Poles'ia (1968), 10, p. 3.

³¹ IVAN TITOV: Belorusskoe Poles'e preobrazhaetsia [Belarusian Polesia is Changing], Moskva 1974, p. 4.

³² Project and development plan for the city of Pinsk, in: Belorusskii gosudarstvennyi arkhiv nauchno-technicheskoi dokumentatsii (BGANDT) [Belarusian State Archive for Technical Documentation], Minsk, vol. 1, 1961, f. 3, op. 4pd, d. 285, l. 29 f.

³³ List of Exemplary Farms on Irrigated and Drained Land, in: Zonal'nyi gosudarstvennyi arkhiv v g. Pinske (ZGAP) [Zonal State Archive in Pinsk], Kontsern po melioratsii zemel' i kompleksnomu obustroistvu khoziaistv “Poles'evodstroj” [Combine for Land Melioration and Comprehensive Establishment of Farming Operations “Poles'evodstroj”], f. 541, op. 1, d. 1, l. 41.

³⁴ JÖRG STADELBAUER: Die Nachfolgestaaten der Sowjetunion: Großraum zwischen Dauer und Wandel, Darmstadt 1996, pp. 257 ff.

³⁵ V. SOKOLOVSKIJ, R. ALIMOV: Arkhitektura novogo belorusskogo sela [The Architecture of the New Belarusian Township], Minsk 1979, pp. 112 ff.

³⁶ Ibidem, p. 78.

time. However, only centers that were designated as “prospective settlements” were able to enjoy this kind of standard of living.³⁷ Those in party circles were convinced that the need for manpower for urban and agricultural concerns could only be met if more and more land was made available to rural settlements that had been upgraded in terms of infrastructure.³⁸ For this purpose, around 6,000 settlements were selected from a total 34,400 villages in the early 1960s.³⁹ The majority of the villages, however, were non-prospective settlements and were denied any kind of civilized modernization measures by the authorities for reasons of cost and optimization.



Fig. 2: One of the modern apartment blocks built in the 1970s in the central settlement of the “Parakhonskii” *sovkhos* in the Brest region (July 2014). Photo: Artem Kouida

While rural areas were being modernized, a propagandic defamation campaign against the traditional way of life was carried out that deliberately promoted black and white thinking. It was not uncommon for people to fall back on descriptions of the “wild nature” that writers, researchers and travelers had

³⁷ L. SPIZHANKOV: *Preobrazovanie belorusskogo sela* [The Transformation of the Belarusian Village], Minsk 1985, p. 9.

³⁸ M. OMELIANCHUK: *K voprosu o predposylkakh razvitiia horodskikh poselenii zapadnoi chasti Belorusskogo Poles'ia* [On the Question of Development Trends of Urban Settlements in the Western Part of Belarusian Polesia], in: S. POL'SKII (ed.): *Problemy rasseleniia v BSSR*, Minsk 1980, pp. 70-76, here pp. 70-72.

³⁹ SPIZHANKOV (as in footnote 37), p. 9.

claimed to have discovered in Polesia in the nineteenth century.⁴⁰ However, this idea seems to have been a construct of urban outsiders who, influenced by colonial thinking, found and sought to describe a certain romanticism in the foreign “wilderness.” An important argument for the draining of marshland was the lack of roads, which was repeatedly taken up as a typical problem in rural Russia.⁴¹ The distance from one town to the next was sometimes made ten times longer because of impassable thoroughfares. As a rule, anyone traveling by foot was forced to lay out a path through the swamp using branches and reeds in order to get across it. The thick layer of mud could only be traversed by those who owned oxen that could be hitched up to a barge. Only in the winter months was it possible for villages to have a more or less regular connection to the outside world via rural paths and roads. This was very problematic during a warm, rainy autumn as the swamps would not freeze over.⁴²

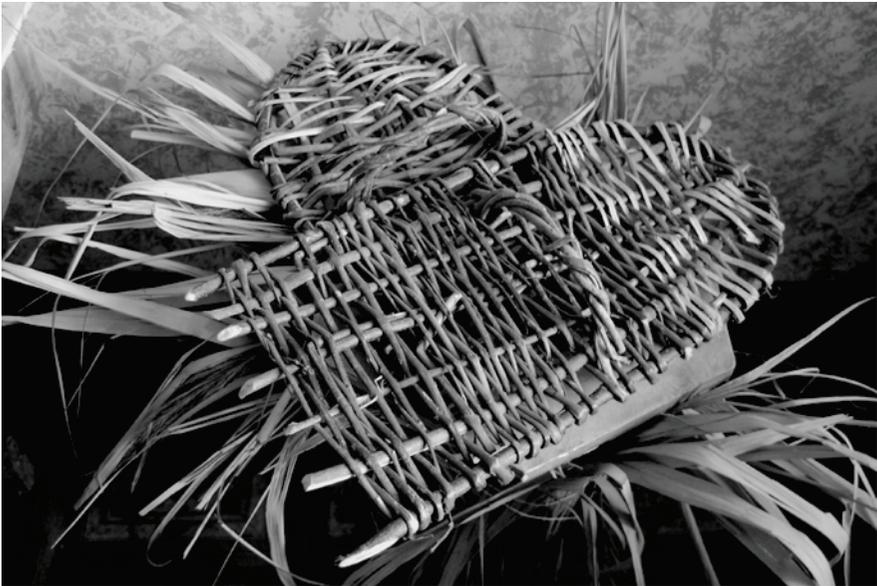


Fig. 3: Handmade footgear for crossing swampland, housed in the Museum for the Land Melioration of Belarusian Polesia in the settlement of Galevo (July 2014). Photo: Artem Kouida

⁴⁰ Cf. IVAN EREMICH: *Ocherki Belorusskago Poles'ia* [Essays on Belarusian Polesia], Vilnius 1868, pp. 67-68; A. KIRKOR': *Dolina Pripeti* [The Pripjat Delta], in: *Zhivopisnaja Rossiia: Litovskoe i Belorusskoe Poles'e*. Reprintnoe vosproizvedenie izdaniia 1882 goda, Minsk 1994, p. 341; J. RUDNEV: *Russkaia zemlia: Belorussko-litovskoe Poles'e* [The Russian Land: Belarusian-Lithuanian Polesia], vol. 7, Sankt-Peterburg 1898, pp. 15-17.

⁴¹ Cf. V. KISELEV: *Priroda i melioratsiia Belorusskogo Poles'ia* [The Natural World and the Melioration of Belarusian Polesia], Minsk 1979, p. 19.

⁴² ZHILINSKII (as in footnote 10), p. 5.

Soviet propaganda vividly emphasized the advantages that the melioration works were meant to deliver to the local population. For example, lists were made of illnesses typically suffered by people living in swampy areas that would allegedly be a thing of the past after the works had been completed. These included swamp fever, typhoid fever and chronic diseases of the throat and lungs as well as the Polish plait (*koltun*). An obvious sign of the latter illness is a matted hair mass that can only be shaved off.⁴³ Interestingly, every swamp also had its own name, like, for example, “Little Island” (*Ostrovki*) or “Decay” (*Gnil*).⁴⁴ Many place names had, for years, referred to typical Polesian plagues, like, for example, “Mosquitoes” (*Komary*), “Sands” (*Piaski*), “Breadlessness” (*Bezkhlebychy*) and “Matted Hair” (*Koltuny*).⁴⁵ Due to constant flooding, Polesia’s inhabitants often built their houses and farm buildings up to a meter above groundlevel.⁴⁶

Seventy-two new *sovkhazy* were planned (and about half of these built) on meliorated land, designed to embody the life and advantages of Soviet power for the local population.⁴⁷ In addition to modern stables, feeding systems, and storage facilities, every *sovkhaz* also had an airstrip for agricultural aircraft. Aerial spraying of fertilizers and pesticides promised extensive cultivation of large areas of agricultural land, saving human and technical resources. However, in many places this did not just affect the fields, but also the trees, bushes, plants and animals living along their edges, which fell victim to the chemical substances.

In the 1970s, the negative side-effects of land melioration became increasingly hard to ignore. The local population was now being confronted more and more often with changes in their environment. The creation of agricultural land through deforestation led to a decimation of naturally occurring cranberry, blueberry and bilberry groves. The river canalization and associated changes in the hydrological systems led to a significant reduction of fish stocks in places where people had previously been able to catch fish with their bare hands. In addition, the drainage works lowered groundwater levels, causing the soil to become drier. Intensive cultivation made the drained peat soil porous, so that it could be blown by the wind into dustclouds, the likes of which had never before been seen in Polesia.⁴⁸ The disappearance of many small rivers and streams as a result of melioration and the decision in many places not to build water reservoirs so as to cut costs increased the risk of peat

⁴³ B. MASLOV, I. MINAEV: *Melioratsiia i okhrana prirody* [Melioration and Nature Conservation], Moskva 1985, p. 212 ff.

⁴⁴ *Zviazda na meliiratsyi Palessia* (1986), 93, p. 3.

⁴⁵ *Belorusskoe Poles'e* [Belarusian Polesia], Minsk 1975, p. 2.

⁴⁶ GRAZHNA RUSHCHYK: *Palesse*, Varshava 1999, p. 59.

⁴⁷ *Kompleksnoe osvoenie zemel' Belorusskogo Poles'ia* [The Complex Development of Land in Belarusian Polesia], Minsk 1987, p. 4.

⁴⁸ J. STEPANOV: *Zybkoie tsarstvo tumanov* [The Precarious Kingdom of Mist], in: *Vokrug sveta* (1970), 7, pp. 39-41, here pp. 40-41.

fires that were difficult to extinguish. Gradually, the problem of Polesia drying out was taken seriously and picked up by the press.⁴⁹ This led to a debate in Belarusian society about climate change, a topic which had already been debated in Russia at the end of the nineteenth century. While ecologists and nature-loving writers believed that a climate change was taking place that would impact the BSSR and even the whole of Europe⁵⁰, the specialists working in the field of melioration merely noted changes in the microclimate of Polesia.⁵¹



Fig. 4: Many streams in Polesia disappeared as a result of river straightening and canalization (July 2014). Photo: Artem Kouida

The intensive agrarian use of soils following the drainage works caused what was in some places only a thin layer of peat to gradually disappear. The sandy soils beneath then reached the surface, making any further agricultural activity impossible. Some areas turned into wastelands that, after a few years, once again reverted back to swamp. In addition to agricultural melioration, a modest amount of forest melioration was also carried out, whereby marshy forests were drained in the hope of recovering the trees. However, the calcu-

⁴⁹ ANATOLII KOZLOVICH: Na vse chetyre storony [In All Directions], in: *Vokrug sveta* (1977), 12, pp. 23-27, here pp. 24-26.

⁵⁰ Cf. GERMAN KRUGLOV: Pripjat': Poslednii shans na vyzhivanie [Pripjat': The Last Chance for Survival], in: *Pis'ma k zhivym*, Minsk 1999, pp. 350-353, here p. 352.

⁵¹ V. ERMOLENKO (ed.): *Kompleksnaia melioratsiia zemel' v Belorusskom Poles'e* [The Complex Melioration of the Lands of Belarusian Polesia], Moskva 1982, p. 49.

lations of the researchers were only seldom successful, and these measures often led to the drying up of forests. Because these forests now posed a fire danger, they were cut down, which meant, in turn, that farmland was no longer sheltered from prevailing winds and the fertile peat topsoil layer was blown away over time.⁵²

These anthropogenic interventions into the natural processes of the land caused numbers of rare flora and fauna to drop dramatically⁵³, so that, for example, 35 percent of plant species native to Polesia⁵⁴ were added to the Red List of the BSSR, which was established in 1981. Among the endangered animals were the snow grouse (*Lagopus Lagopus L.*)⁵⁵ and the terrapin (*Emys Arbicularis L.*)⁵⁶. Convinced of the need to protect particularly fragile Polesian landscapes from being completely destroyed, the state authorities established individual nature reserves, one of the largest of which in the BSSR was the “Pripiatskii” Nature Reserve.⁵⁷ However, since nature conservation regulations were not observed by everyone and effective penalties in most cases failed to materialize, illegal activities often took place in the region, including the unsanctioned clearing of forests by neighboring *kolkhozes*⁵⁸ and the use of this land for pasture.⁵⁹

From the 1970s on, the environmental changes that were increasingly coming to light in the course of melioration works led to a mood of protest in the BSSR, which was particularly pronounced amongst the urban intelligentsia. The Belarusian Writers’ Union was responsible for organizing discussion rounds, journalistic expeditions to Polesia and publications of scathingly critical articles about the environmental and social consequences of melioration. In the course of these actions, the Belarusian writer Uladzimir Karatkevich circulated the term “small, sandy deserts” to describe what was happening to the landscape.⁶⁰ Among other topics, the Polesian poet Evgeniia Janichits wrote about the destruction of the natural world in Polesia as a result

⁵² KOZLOVICH, Na vse (as in footnote 49), pp. 24-25.

⁵³ I. BYSHNEU, A. KAZULIN: *The Pripiat: Living Water of Polesie*, Minsk 2003, p. 10.

⁵⁴ L. SUSHCHENIA, M. PIKULIK: *Itogi i perspektivy izucheniia vliianiia melioratsii na zhi-votnyi mir* [Findings and Perspectives of the Research on the Influence of Melioration on the Animal World], in: *Problemy Poles’ia* 14 (1991), pp. 131-153, here p. 142.

⁵⁵ A. DOROFEEV, S. SIUBOROVA: *Oni ne dolzhny ischeznut’* [They Cannot be Allowed to Disappear], Minsk 1987, pp. 42-43.

⁵⁶ *Ibidem*, pp. 68-69.

⁵⁷ For more details cf. THOMAS M. BOHN, ALIAKSANDR DALHOUSKI: *Nature Conservation in the Belarusian Marshland: The Pripiat National Park as Timber Source and Hunting Paradise*, in this issue.

⁵⁸ ANATOLII KOZLOVICH: *Na moei ladoni liniia reki* [The Course of the River on My Hand], Minsk 1987, p. 187.

⁵⁹ *Ibidem*, p. 210.

⁶⁰ ULADZIMIR KARATKEVICH: *Ziamlia pad belymi kryłami* [The Country beneath White Wings], Minsk 1992, p. 11.

of meliorative work⁶¹, while the journalist Anatolii Kozlovich criticized many of the ill-considered meliorative measures in his articles.⁶² The end of the 1980s even saw the advent of the term “meliorative Chernobyl,”⁶³ as the critique of human interventions into the natural environment and the considerable damage they had caused reached its peak. As a backlash, a large spectrum of people, from the proponents of melioration through to academics, began to refer to the journalists and authors of critical articles as “asphalt ecologists,”⁶⁴ who had gathered their impressions of “true rural life” through hearsay and did not wish or attempt to understand the hard everyday realities facing inhabitants of Polesia. And it was true that, when faced with the phenomenon of progress on all sides, the local population had begun to struggle with the lack of paths and living surrounded by water. In the mid-1970s, for example, it was still possible to observe herds of cows wading belly-deep in the swamps. It was also not rare to see cows swimming behind a boat—crossing water was part of their everyday life.⁶⁵

The general modernization processes, not only those associated with the melioration, fundamentally transformed the lifestyle of the inhabitants of Polesia. Motorization, electrification and the establishment of a modern infrastructure meant they no longer had to be self-sufficient but could now buy everything they needed in a store and, in theory, did not have to stockpile provisions any more. In addition to this, the state regulation of purchase prices made practices like berry-picking, for example, unprofitable and thus unattractive. Ultimately, the depletion of biological productivity led to a drastic reduction in the yield of wild cranberries, which naturally grew in raised bogs. However, the plants were not threatened by melioration, but by anthropogenic interference more generally. Cranberries were considered a typical natural product of Belarusian Polesia and were traded for hard Western currency, so their populations had to be preserved at all costs. Scientific investigations were carried out which proved that the best climatic conditions in the Soviet Union for cultivating cranberry plantations were to be found in the Pinsk region—and thus in the center of Polesia.⁶⁶ Since such plantations did not yet exist in the Soviet Union, experience had to be gained abroad. The U.S. American cultivated cranberry was chosen as the starter crop as this variety had been cultivated there for more than 150 years.⁶⁷ The first Soviet attempt to cultivate the cranberry in Belarus was undertaken by the Botanical

⁶¹ EVGENIIA JANISHITS: Pro bolota [On the Swamps], in: Nėman (1986), 8, p. 5.

⁶² Cf. ANATOLII KOZLOVICH: Propala Krinitsa ... [The River Krinitza has Disappeared ...], in: Druzhiba narodov (1982), 5, pp. 170-172.

⁶³ Cf. Meliorator (1989), p. 12.

⁶⁴ Ibidem, p. 10.

⁶⁵ VITAL' VOL'SKI: Palesse [Polesia], Minsk 1974, pp. 17-18.

⁶⁶ SUCHKOV/RAVOVOI/STYCHINSKII (as in footnote 13), vol. 2, p. 142.

⁶⁷ IVAN TITOV: Belorusskoe Poles'e glazami sovremennika [Belarusian Polesia through the Eyes of a Contemporary], Minsk 2008, p. 159.

Garden of the BSSR's Academy of Sciences. In 1980, a 10-hectare test plantation was set up in Hantsavichy District in the region of Brest. The results observed there led to the establishment of an even larger plantation and increasing yields of 10 tonnes of cranberries per hectare.⁶⁸ In 1985, the first profit-oriented cranberry plantation, with an area of 12 hectares, was set up near Pinsk and enlarged in 1986 to 25 hectares.⁶⁹

In March 1985, a signed agreement with a U.S. company ensured the delivery of seeds, technical documentation, specialized technical equipment and technical assistance for a period of six years. The Soviet Union paid 1.13 million US dollars and agreed to pay accommodation, food and transport costs for the American specialists. A daily allowance of 132 US dollars per person was a particularly attractive incentive (and a costly one for the Soviets). Included in the deal was travel from Moscow to Pinsk and back. Suddenly, this small capital became the center of an innovative joint venture—from a scientific and economic point of view—that put Pinsk on the world map, even though, twenty years earlier, it had been a godforsaken city in the middle of the Pripiat swamps holding no particular appeal at all.

The cuttings were flown to Minsk in a special container and then transported in a refrigerated truck to Pinsk. Since the Belarusians had no experience in setting up artificial cranberry plantations or, in particular, with the hydrologic balance required for such an operation, a direct telephone connection was established between Pinsk and the USA via Moscow. The USSR's Ministry of Melioration acted as go-between and translator. The increase in natural yields presented the head office with a new challenge, namely the task of industrially processing of the cranberries, for which there was no capacity or experience in the USSR to date. A delegation of researchers and melioration experts from Pinsk was sent to the USA to learn about all the necessary processes first-hand.⁷⁰

However, due to high investments and a period of up to five years where the cost-profit ratio remained, according to Soviet planning standards, too unbalanced, the project turned out to be rather of symbolic than of economic importance and did not expand further.⁷¹

In summary, it can be said that melioration in Belarusian Polesia was continuously practiced, not only from the mid-twentieth century on, but already during the second half of the nineteenth century. For the twentieth century, two stages of a particularly intensive melioration process can be identified: the interwar period and the Brezhnev era. Each stage was shaped by the particular ideas around modernization that predominated at the time. The do-

⁶⁸ Kompleksnoe osvoenie zemel' Belorusskogo Poles'ia (as in footnote 47), p. 18.

⁶⁹ Sorazmerno vremeni [According to the Time], in: Nėman (1986), 8, pp. 124-131, here p. 129.

⁷⁰ TITOV (as in footnote 67), pp. 160-161.

⁷¹ Interview by Artem Kouida with Nikolai Savul'chik, the former head engineer for meliorative systems in the Pinsk region, on 2014-07-10 in Pinsk.

minion over nature, which characterized the Stalin era, became a symbol for the superiority of the new Soviet man over the forces of nature in the canon of the Soviet ideology of the time. The efforts of the Soviet government in the Brezhnev era to raise the standard of living of a constantly growing population and to ensure a sufficient supply of food brought, for the first time, the solution of agricultural development and the associated modernization of peripheral regions to the agenda. Though these approaches were already meant to be implemented during the Krushchev era, the early successes were nullified by arbitrary planning and ineffective, cost-saving initiatives.

Brezhnev's policies of intensifying agriculture and draining larger areas of land, including in Polesia, ignored the issue of nature conservation until at least the end of the 1960s, which in many cases negatively impacted the natural environment. The modernization, chemicalization and mechanization of the agricultural sector were state funded initiatives that saw humans and technology devastate the natural world. Major operations to drain the land, deforestation, the spraying of pesticides using agricultural aircraft, together with intensive cultivation of soil, in many places caused streams to dry up, the groundwater levels to sink, dust storms and changes in flora and fauna that led to many species becoming endangered. On the other hand, the draining of swampland led to a fundamental transformation of Polesia's landscape and thus also to the lifestyle of its inhabitants. Gradually, the everyday lives of these people became irrevocably altered and shaped by the advance of modernity—paved roads, automobiles, modern townships and electricity. Supply no longer depended primarily on natural conditions and environments like forests and rivers but could now be provided by grocery and commodity stores. With an increase in the numbers of kindergartens, schools, hospitals, cultural clubs, libraries and service combines, the primary needs of the population could be met locally for the first time. In addition to traditional rail and water transport, there was a general increase in mobility in Polesia due to a regular flight service to Minsk and car transport, which was largely independent of seasonal conditions. These developments fundamentally changed the traditional way of life across the region, which was also strongly influenced by external factors such as consumption and state propaganda. Despite enormous efforts by the state to keep the population in the countryside, the increasing importance of mobility and the significant improvement in living conditions and educational opportunities in urban centers led both to a growing rural exodus, particularly among young people,⁷² and the loss of old traditions in rural areas.⁷³

⁷² SAFRONII ZHLOBA: *Suchasnaia paleskaia veska: Pamizh tradytsyiai i inavacyiami* [The Modern Polesian Village: Between Tradition and Innovation], in: ARCHE (2011), 3, pp. 68-69.

⁷³ ANATOLII TARAS: *Istoriia imperskikh otnoshenii: Belarusy i russkie 1772-1991* gg. [The History of Imperial Relations: The Belarusians and the Russians 1772-1991], Smolensk 2008, p. 438.

Efforts to protect the natural environment from further anthropogenic intervention were often fraught with difficulty because of a lack ecological awareness, both at the level of local authorities and among the general population. The Belarusian urban intelligentsia took up an active position in this struggle, with the Writers' Union acting as their mouthpiece. At the scientific level, some projects, such as the establishment of cranberry plantations, could even be carried out on an international scale as the political will backing them was strengthened through the scientific interests.

Thus, melioration gained an important position in Belarusian Polesia as a key aspect of modernization, though one that also impacted the natural environment and caused negative consequences, which came to the fore with increasing seriousness over time. On the other hand, these changes to the land brought about unprecedented socio-economic change, as a result of which Polesia became comparable to other more developed regions and, in some areas, even surpassed them.

