Urban History (2025), 1–19
doi:10.1017/S0963926825100370

CAMBRIDGE UNIVERSITY PRESS

SPECIAL ISSUE ARTICLE

SPECIAL ISSUE: INDUSTRIAL URBANISMS AND ENTANGLED MODERNITIES IN EURASIA

Extractive assistance: copper mining, socialist development and urban planning in Mongolia, 1962–1983

Nikolay Erofeev

Osteuropa-Institut, Freie Universität Berlin, Germany
Email: nikolay.erofeev@fu-berlin.de

Abstract

Focusing on the case of Mongolia during the Cold War, this article analyses how the goals of resource extraction and socialist development shaped urban and regional planning in the country. The article examines the negotiations for development assistance between Mongolia, the Soviet Union, East Germany and Czechoslovakia since 1962, with a particular focus on the foundation of the mining city of Erdenet in 1973 as a key outcome of these negotiations. It demonstrates that mineral extraction was the central aspect of socialist assistance. The requirements and scale of mining infrastructure provided a distinct logic to urban and regional planning in the country. The article argues that in the socialist development vision, extraction was integral to urban thinking. The socialist approach to resource development in Mongolia employed a heavy-handed approach of extensive urbanization, contrasting sharply with post-socialist urban patterns shaped by investments from private extractive industries.

Introduction

In March 1973, Soviet military battalions arrived in Erdenet, a remote mining deposit in northern Mongolia, to start the construction of a mono-industrial city next to a copper deposit. They started by establishing a tent city with a canteen, headquarters, warehouses and other army facilities. Soon, parts of prefabricated barracks and residential buildings began to be imported by trucks over the unpaved roads.[1] What started with Soviet soldiers working on a greenfield site, in just three years expanded into the largest construction project in the country, with a more than 14,000-strong Mongolian–Soviet construction force on the site. Erdenet was a huge showpiece of industrial-extractive urbanism in Mongolia. The development of the city started following the discovery of one of Asia's largest copper and molybdenum deposits –

[1] A. Chekashev, *Dela i Ludi Erdeneta* (Moscow, 2003), 30.

© The Author(s), 2025. Published by Cambridge University Press. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (http://creativecommons.org/licenses/by/4.0), which permits unrestricted re-use, distribution and reproduction, provided the original article is properly cited.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press



Figure 1. The town of Erdenet, 1978.
Source: RGAE, f. 573, o. 1, d. 229, l. 37.

the Erdenetiin-Ovoo deposit – by Mongolian and Czechoslovakian geologists in 1968. A large open quarry, mining-processing plant and a mono-industrial city around it were developed in the following decade with massive financial and technical assistance from the USSR. The factory went into operation in 1978.[2] Today, Erdenet is the third largest and youngest city in Mongolia, with a population of around 100,000 people (Figure 1).[3]

Erdenet was the epitome of socialist industrial life, with its mine surpassing production targets and embodying socialist ideals of heavy industry. It was also the single largest urban development project completed with assistance of the Soviet Union in Mongolia. During the Cold War, the development assistance of the Soviet Union and Eastern European countries was crucial for urbanization and industrialization of the country. Extensive industrial and residential development projects were carried out in the country in the 1960s and 1970s with the involvement of the Soviet Union as well as East Germany (GDR), Czechoslovakia, Poland and Bulgaria.[4] Among the many urban projects completed with socialist assistance – from housing blocks and schools to hospitals and museums – Erdenet remains the largest. It is not a coincidence that this major project was related to an extractive industry and

[2]I. Trifonov and Y. Krouchkin, *Mongolia: Its Mineral Resources and Law Encyclopedia* (Moscow, 2000), 46.

[3]For an anthropologic account on Erdenet, see M.J. Smith, 'Treasure underfoot and far away: mining, foreignness, and friendship in contemporary Mongolia', dissertation, Princeton University, 2015.

[4]See N. Erofeev, 'Complementary assistance: multilateral exchanges between the Soviet Union, China and Eastern-European countries in Cold War Mongolia', *Cold War History*, 24 (2024), 453–73.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press

developed to accommodate the employees of a mining company. Extraction was an inevitable feature of both capitalist and socialist economies and natural resources were central to the involvement of both the Western and Soviet blocs in the so-called 'Third World'.[5] Tungsten, copper and other non-ferrous metals held a strategic significance for the Soviet bloc, being essential for the industrial and military sectors of state-socialist countries. As non-ferrous metals fell under Western embargo, the leaders of the Soviet bloc struggled to establish their own markets for raw materials.[6] Under the auspices of 'technical assistance', they embarked on a wide-ranging programme for the construction of infrastructure and factories in Asia, Africa and Latin America in exchange for raw material imports.[7] Resources were high on the international agenda of the CMEA (Council for Mutual Economic Assistance).[8] While the Soviet-led CMEA was initially designed as an institution to promote a socialist 'alternative' development, in the 1970s, the East started pursuing more 'realist' policies that prioritized economic expansion and solvency over ideological concerns. As some Eastern European countries faced economic stagnation in the 1970s, 'solidarity fatigue' also kicked in and the logic of socialist assistance shifted towards more pragmatic mercantile interests, in particular, in securing sources of mineral resources.[9] In this context, the joint procurement of raw materials was given increasing prominence in CMEA institutions. Rich in non-ferrous metals, Mongolia was at the top of the agenda of mineral development after the country joined the CMEA in 1962.

Soviet leaders saw resource extraction as key for achieving post-colonial development and economic self-sufficiency for newly independent states as well as independence from the West.[10] However, extensive literature on development has shown the potentially exploitative nature of transnational resource extraction and the asymmetric power relations it frequently entails. In this regard, socialist extractive industries were not entirely distinct from their capitalist counterparts and they often reproduced neocolonial patterns of exchange.[11] These contradictory tendencies are highly visible in Mongolia. By the end of the Soviet period, mining developed into one of the most important economic sectors for Mongolia and reportedly accounted for

[5]O.A. Westad, *The Global Cold War: Third World Interventions and the Making of Our Times* (Cambridge, 2005), 90.

[6]See also M. Trecker, *Red Money for the Global South: East–South Economic Relations in the Cold War* (London, 2020), 47–9, 64–6, 106–9; J. Zofka, 'The China market: East German and Bulgarian industrial facility export to the PRC in the 1950s', *European Review of History*, 30 (2023), 452–72, at 456–7.

[7]F. Flade, 'The role of the Council for Mutual Economic Assistance in the construction of the Transnational Electricity Grid MIR', *Comparativ*, 27 (2017), 48–64.

[8]A special section of the Comecon's Complex Program was devoted to the issue of collective efforts for obtaining Third World raw materials and fuels in short supply, specifically, oil and gas and non-ferrous metals. See M. Lipkin, 'The Second World's "technopolitics" in the Third World', in P. Svik and W. Mueller (eds.), *Technological Innovation, Globalization and the Cold War: A Transnational History* (London, 2023), 65.

[9]C. Schwenkel, *Building Socialism: The Afterlife of East German Architecture in Urban Vietnam* (Durham, NC, 2020), 91; S. Lorenzini, 'Comecon and the south in the years of détente: a study on east–south economic relations', *European Review of History*, 21 (2014), 183–99.

[10]J. Mark and P. Betts, *Socialism Goes Global: The Soviet Union and Eastern Europe in the Age of Decolonisation* (Oxford, 2022), 75–114.

[11]A. Jersild, 'Socialist advisers and the dilemmas of the "socialist world system": Sino-Soviet exchange as a model for failure in Guinea-Conakry, 1950–64', *European Review of History*, 30 (2023), 433–51.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press

42 per cent of exports.[12] At the same time, Mongolian scholars have also discussed Soviet development in terms of 'colonialism', arguing it helped turn the country into a resource colony.[13]

This article introduces more complexity into the discussion of socialist assistance through the lens of mineral extraction, exploring how resource extraction correlated with the broader aims of urbanization and industrialization along socialist lines as well as how natural resources informed the territorial planning of the country.[14] Resource extraction significantly shaped urban development across the Soviet bloc, as new urban centres were founded with the objective of exploiting the resources of these regions in a viable way.[15] Less literature, however, has discussed the relationship between Soviet-led resource extraction and urban development patterns in the Global South. The burgeoning literature on socialist development assistance discusses material and immaterial encounters between socialist countries and the Third World, often employing the concept of an 'alternative modernity' to emphasize the distinctiveness of socialist development in contrast to capitalist aid.[16] Alessandro Iandolo discusses this 'alternative' development in the Third World as 'a Soviet model of development'.[17] According to this model, Soviet assistance placed a priority on the build up of heavy industry, infrastructure and long-term planning mechanisms to assist in the country's transformation along socialist lines. During the Cold War, Soviet involvement in Mongolia was consistent with such descriptions of a model of development that put an emphasis on the establishment and comprehensive elaboration of Mongolia's industrial base.

Drawing on sources from Russian, Mongolian and German archives, this article reconstructs a vision of urbanization and mining of non-ferrous metals in Mongolia in 1962–83 as two interdependent processes that were part and parcel of a vision of socialist modernity. The article demonstrates that the objectives of resource extraction were an integral part of CMEA assistance during the Cold War, and that demand for minerals created tight competition between CMEA countries as they rushed to explore and exploit Mongolian deposits. In this vision of socialist development,

[12]R.L. Worden and A.M. Savada, *Mongolia: A Country Study* (Washington, DC, 1991), 141. In 1989, the mineral industry accounted for about 19% of Mongolia's GDP: *Mineral Industries of Asia and the Pacific* (US Department of the Interior, Bureau of Mines, 1989), 255.

[13]See, for example, O. Myadar, 'In the Soviet shadow: Soviet colonial politics in Mongolia', *Inner Asia* 19 (2017), 5–28.

[14]On Soviet involvement in the Third World, see Mark and Betts, *Socialism Goes Global*; J. Friedman, *Ripe for Revolution: Building Socialism in the Third World* (Cambridge, MA, 2021); K. Roth-Ey, *Second–Third World Spaces in the Cold War: Global Socialism and the Gritty Politics of the Particular* (London, 2022); I.M. Scarborough, *Moscow's Heavy Shadow: The Violent Collapse of the USSR* (Ithaca, 2023); Schwenkel, *Building Socialism*; D.C. Engerman, *The Price of Aid: The Economic Cold War in India* (Cambridge, MA, 2018); O. Sanchez-Sibony, *Red Globalization: The Political Economy of the Soviet Cold War from Stalin to Khrushchev* (Cambridge, 2016).

[15] S. Collier, *Post-Soviet Social: Neoliberalism, Social Modernity, Biopolitics* (Princeton, 2011), 65–84. See also J. Pallot and D.J.B. Shaw, *Planning in the Soviet Union* (London, 1981); A. Bond, 'Urban planning and design in the Soviet north: the Noril'sk experience', *Soviet Geography*, 25 (1984), 145–65.

[16]A. Iandolo, *Arrested Development: The Soviet Union in Ghana, Guinea, and Mali, 1955–1968* (Ithaca, 2022), A.M. Kalinovsky, *Laboratory of Socialist Development: Cold War Politics and Decolonization in Soviet Tajikistan* (Ithaca, 2018).

[17]A. Iandolo, 'The rise and fall of the "Soviet model of development" in West Africa, 1957–64', *Cold War History*, 12 (2012), 683–704.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press

extraction was an integral part of urban thinking, as mining-processing plants relied on heavily settled, rather than rotational workforces. Following the Soviet model of development, planners tended to incorporate mining facilities into national urban systems, while aligning extraction with long-term plans for the country. Mineral extraction provided a distinct logic to urban development, as the requirements and scale of extraction infrastructure profoundly influenced planning decisions and urban development, shaping urbanization and regional planning for years to come. Yet, the lack of urban logistical infrastructure prevented effective access and plagued the extraction work, hindering transportation of resources to market. The socialist approach to resource-led development in Mongolia, thus, relied on a pattern of urbanization which contrasted markedly with post-socialist urban patterns formed in part by the investments of private extractive industries.

Socialist assistance and mineral procurement

On 7 June 1962, Mongolia joined the CMEA as the first non-European member-country. Delivering his inauguration speech at the 16th meeting of the CMEA, the leader of the Mongolian People's Republic, Yumjaagiin Tsedenbal, discussed his vision of the role and position of Mongolia in the Soviet bloc.[18] He expressed a conviction that 'extensive assistance' from socialist countries would help to develop the various branches of its national economy.[19] At the same time, he attempted to frame exchanges with Mongolia as potentially mutually beneficial for European countries.[20] Tsedenbal suggested that with technical assistance Mongolia could help develop a base of natural resources and export them to meet the demand of other socialist countries. He offered to 'explore the rich minerals and natural resources of the country' through the joint efforts of socialist nations in the interests of the entire world socialist system: 'We ask the Central Committees of the fraternal parties and the governments of the CMEA members to include measures for the development of the natural resources of Mongolia in their general long-term plans.'[21]

The discussion of the potential of mineral extraction in Mongolia was raised at the very first meeting of the CMEA. In his speech, Tsedenbal articulated the Soviet leaders' vision of Mongolia in the socialist world economy. According to the Soviet theory of the international division of labour, CMEA countries had to develop intra-bloc relations, which offered economic stimulus for multiple countries. While assistance to the Third World was promoted under various types of solidarity campaigns, the discourse of new 'mutually beneficial' conditions was supposed to expand trade and serve as an additional stimulus for assistance. According to the latter, Eastern European countries would take up urban development projects in Mongolia, and also invest in minerals as an additional stimulus for their investments.

Socialist countries responded enthusiastically to Tsedenbal's request on both the national level and on the level of CMEA institutions. Natural resource development had become a central theme for discussion at the CMEA's Permanent Commission for Technical Assistance and Permanent Commission for Metallurgy (PCM) since

[18]Rossiiskii gosudarstvennyi arkhiv noveishei istorii (RGANI), f. 5, o. 49, d. 648, l. 176.

[19]*Ibid.*

[20]M. Lipkin, 'The "global cooperative of peoples": the Council for Mutual Economic Assistance that Nikita Khrushchev tried to build', *Novyi Istoricheskii vestnik*, 4 (54) (2017), 121–44.

[21]RGANI, f. 5, o. 49, d. 648, l. 178.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press

1960. Additionally, a new institution, the Permanent Commission for Geology (PCG) was established and held its first meeting in Ulaanbaatar in 1963.[22] Both commissions agreed to start assisting Mongolia with comprehensive mineral procurement activities. They co-ordinated a systematic nationwide mapping of the country's geology, which had not been carried out until then. The PCG was placed in charge of conducting research on the 'geological structure and regularities in the distribution of deposits of the most important minerals'.[23] In the following decades, CMEA institutions organized dozens of geological expeditions with the participation of experts from various socialist countries, for surveying and exploiting valuable mineral deposits in Mongolia.[24]

The exploration for minerals was one among many forms of assistance, as socialist countries were supposed to assist the development of other branches of Mongolia's industry. To agree on these efforts, in 1963 the Mongolian Planning Agency organized consultations with the representatives of most CMEA countries to co-ordinate their assistance obligations with Mongolia's forthcoming five-year plan.[25] The expectations of Mongolian officials were high, as they prepared a 'shopping list' with an extensive collection of urban development projects, housing, industrial facilities and various infrastructure, which they expected to secure. Mongolia's leaders sought assistance in the development of such ambitious projects as a cement factory, a metallurgical plant, leather production plants and wood-working plants.[26] These were envisioned as major urban developments, as Mongolian officials sought not only the industrial facilities themselves but also accompanying infrastucture and housing. For example, a planned wood-working plant included a settlement for 6,000 people for the operating personnel and auxiliary services.[27]

From the Mongolian 'shopping list', it is clear that Mongolian officials sought assistance for the comprehensive development of industry, seeing their country as a supplier of a wide range of processed products for CMEA markets, including agricultural products, clothes, shoes, carpets and other consumer goods. CMEA countries held a different view, however. The discussions of Mongolia's 'shopping list' were held in bilateral consultation with each of the CMEA countries. Negotiating with Poland, Mongolian officials presented a list of 18 projects. However, the Polish delegation rejected most of the proposals, agreeing on only eight positions. Among the agreed projects, the Poles were especially interested in mineral extraction, agreeing to provide three tin mines equipped with mining-processing plants. The Poles also proposed, on their own initiative, assistance in conducting additional exploration for minerals in Mongolia, including exploration for gems with the subsequent creation of a mining company in case of their detection.[28]

[22]Rossiiskii Gosudarstvennyi Arkhiv Ekonomiki (RGAE), f. 561, o. 19, d. 1.

[23]See RGAE, f. 561, o. 19, d. 174.

[24]See, among others, RGAE, f. 561, o. 19, d. 154, 168.

[25]On consultations, see N. Kamandzhaev, 'Revisiting the first experience of bilateral consultations for Mongolia's planning agency within the Council for Mutual Economic Assistance, September to October of 1963', *Oriental Studies*, 15 (2022), 451–9.

[26]RGANI, f. 5, o. 49, d. 648, l. 159.

[27]Arkhiv vneshnei politiki Rossiiskoi Federatsii (AVP RF), f. 45, o. 280, d. 18, l. 99–101.

[28]RGANI, f. 5, o. 49, d. 648, l. 157.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press

Negotiations with the GDR delegation followed a similar trajectory. In the words of one Soviet diplomat, the East Germans were 'baffled' (*ozadacheny*) by Mongolian requests to provide assistance for 10 projects.[29] The East Germans refused to support the construction of a knitting factory, chemical works and porcelain foundry, justifying their decision through the lack of credibility in the 'economic effectiveness' of these facilities. However, the East German delegation was similarly ready to provide 'assistance' in mineral exploration. Based on the results of the consultation, an agreement was reached on assistance for the following five projects, among which the mineral-extraction sector was dominant: the construction of an enterprise for the extraction of germanium from coal, a gold mine and the development of quartz deposits.[30] On their own initiative, they offered to provide additional assistance in geological exploration for gold, quartz and other minerals.[31] With other countries, the situation was similar. The Polish and Czechoslovak delegations also proposed the provision of an additional loan to carry out geological exploration work. The Czechs were ready to send their geologists and all the required materials for the development of a geological base and the organization of geological exploration work on the territory of the Khövsgöl and Bulgan provinces (*aimags*) in order to identify reserves of non-ferrous metals.[32]

In comparison with the smaller CMEA countries, Soviet assistance stood out by investing more in Mongolia, taking on obligations to develop multiple facilities and infrastructures, such as power stations, heating, water and sewage treatment plants, milling and construction industries and housing.[33] However, the Soviets were also interested in aligning their assistance with mineral extraction. Soviet representatives expressed their interest in investing in enterprises for the extraction of fluorite and quartz.[34] The negotiations over assistance make it clear that Eastern European countries seemed to be more interested in extracting minerals in Mongolia than investing in other sectors. If urban development projects were discussed, they were supplemented by agreements for mineral exploration, or closely tied to them.

Following the interest in extraction, multiple mineral procurement activities were undertaken in the country as geological expeditions from various Eastern European countries arrived in Mongolia. In 1963, the PCG organized an expedition by an internal group of experts with the task to explore possible mineral locations and prepare proposals for their extraction.[35] Hungarian experts became involved in the search for molybdenum in the Aryn Nuur region. Czechoslovakia and Bulgaria carried out explorations for tin and tungsten deposits.[36] GDR specialists focused on comprehensive exploration for gold in the country.[37] Czechoslovakia, together with Mongolian counterparts, carried out geological surveys for gold and copper in the central and northern regions of the country.

[29]*Ibid.*, l. 156.
[30]*Ibid.*, l. 154–6.
[31]*Ibid.*, l. 156.
[32]*Ibid.*, l. 65.
[33]*Ibid.*, l. 172–4.
[34]*Ibid.*, l. 149–52.
[35]*Ibid.*, l. 176.
[36]RGAE, f. 561, o. 25, d. 385.
[37]RGANI, f. 5, o. 63, d. 469, l. 25.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press

Assistance in mineral procurement on such an unprecedented scale yielded significant results. Multiple deposits of gold, copper and molybdenum were discovered. Hungarian geologists, together with their Mongolian colleagues, discovered a number of deposits of tungsten, molybdenum and polymetals, and conducted prospecting and surveying in the eastern part of Mongolia.[38] German geologists discovered prospective reserves of gold in the north of the country, specifically, gold ore nodes in Khentii and Bayankhongor provinces. Gold deposits were mapped out in all regions of the country, detailing more than 300 specific locations as major finds.[39]

Extraction and territorial development

Following the discovery of minerals, Mongolian officials proposed establishing joint enterprises for the extraction of copper, fluorspar, tungsten, gold and other metals.[40] Speaking at the CMEA meeting, the chairman of the Council of Ministers of Mongolia Jambyn Batmönkh requested assistance in the development of phosphate and copper deposits: 'the development of these deposits can only be successfully carried out through the joint efforts of the countries of the socialist community…We express our confidence that the fraternal countries will show their interest and initiative in the joint development of these large mineral deposits in our country.'[41]

Interest in resource development was reflected at the CMEA institutions. The PCG started planning the development of non-ferrous metallurgy in Mongolia, and researching ways of extracting and processing copper, tin, tungsten and molybdenum.[42] The PCM, meanwhile, was tasked with developing specific projects of extraction of resources and designing mining-processing plants. Planning groups from various countries carried out detailed elaboration of extraction potential of deposits around the country.[43]

While inviting potential investors, Mongolian officials made it clear that their invitation to participate in the 'joint development of mineral deposits' implied territorial development and investments in infrastructure. This was made clear during the visit of the GDR official Willi Stoph to Ulaanbaatar in September 1968, where Tsedenbal offered the opportunity to invest in the potentially highly profitable deposit of coking coal. He also emphasized investment in infrastructure as a precondition for this project:

> [In Mongolia, there are extensive deposits of] copper and non-ferrous metals. We also have coking coal deposits. Through joint efforts with other countries, we must solve the problem of transportation. Major investments are required. In the south, the coal is located only half a metre below the surface, but 500 km from the closest railway line. To date, 4 billion tons of coking coal have been

[38]RGAE, f. 561, o. 25, d. 385, l. 2.

[39]M.M. High, *Fear and Fortune: Spirit Worlds and Emerging Economies in the Mongolian Gold Rush* (Ithaca, 2017), p. 9.

[40]RGANI, f. 5, o. 67, d. 585, l. 18.

[41]A.V. Iurasov, *Sovetsko-Mongol'skie ekonomicheskie Svazi, 1955–1985* (Moscow, 2019), 633.

[42]RGAE, f. 561, o. 25, d. 385.

[43]RGAE, f. 561, o. 25, d. 409, l. 197–9. Published in Iurasov, *Sovetsko-Mongol'skie*, 622.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press

> discovered. But the costs are high. If we want to extract this deposit, we have to build a 500-km-long railway line. Transport of resources for export can be facilitated through this line.[44]

Infrastructure and territorial development presented major issues in most extraction projects. The wide, unexplored territories of the country and the lack of infrastructure posed significant challenges for extraction of deposits in greenfield sites. In 1970, the capital was the only Mongolian city with a population over 50,000. As a consequence, planners gave priority to deposits located in relative proximity to existing logistical infrastructures. Out of a number of gold deposits discovered by the East German specialists, planners considered just one – Boroo deposit – to be the most promising for extraction due to its relative proximity to the railway line and the asphalt road to Irkutsk and power lines.[45] However, even in this case, connecting the deposit to existing logistical infrastructures was expensive. The planners estimated that the deposit would be depleted in 12 years, making such investments unreasonable. Despite working on the deposit since 1955, in 1974, the GDR government decided to withdraw from the project.[46]

The lack of water in the arid Mongolian climate was another major issue. In the conversation mentioned earlier, Tsedenbal explained that the lack of water was the major deterrent for other extraction projects: 'Water is a big problem. Sometimes you find water at a depth of 10 metres, in other places at 100 or 120 metres.'[47] The lack of fresh water near the Tsagaan Suvarga deposit hindered the project, even though CMEA countries were initially interested in the extraction.[48] As with other industries in Mongolia, mining was conceived not merely as the construction of mines but as a broader undertaking in urban development.

Disappointment about the development of extraction in Mongolia is evident in the discussion between the GDR planners. Since 1955, the GDR had been among the countries most active in regard to minerals. East German geologists conducted a technical-economic study on the possibilities of industrial development of dozens of various deposit groups of gold, tungsten, copper and zinc around the country.[49] However, these projects never went beyond the planning phase. Most deposits remained unexplored because of their remoteness from transportation and industrial centres.[50] When it came to actual construction, the GDR's assistance was limited to just one facility, Bürentsogt tungsten mine. In contrast to deposits on greenfield sites, this mine was located in a settlement, founded in 1948, following the discovery of tungsten by Soviet geologists. The settlement of Bürentsogt with 2,100 inhabitants consisted of more than 80 single-storey residential and administrative buildings, with a hospital, a school, a kindergarten, a cultural centre and even a hotel. There was a central diesel-electric station, a post office, water supply and other communications

[44]Bundesarchiv, Berlin (BArch), DC20-20822, 82–3.
[45]BArch, DC20-5350, 86, 161.
[46]BArch, DC20-5350, 161.
[47]BArch, DC20-20822, 84.
[48]Iurasov, *Sovetsko-Mongol'skie*, 622–4.
[49]Deposits of Boroo, Deus Mod and Barin-Tologoi. BArch, DC20-11867, 10.
[50]High, *Fear and Fortune*, 9. E.g. the large Tavan Tolgoi deposit of coking coal: Worden and Savada, *Mongolia*, 141.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press



Figure 2. The general view of the settlement and a Bürentsogt mine, 1958.
Source: General Authority for Archives of Mongolia, Ulaanbaatar (AEG), K-329.



Figure 3. Miners at the Bürentsogt mining plant, 1958.
Source: AEG, K-326.

networks.[51] The GDR's assistance was limited to the reconstruction of the mining equipment to double production (Figures 2 and 3).[52]

[51]J. Stübner, *Geologen und Bergleute in der Mongolei. Die deutsch-mongolische Zusammenarbeit 1972 bis 1991* (Dresden, 2011), 266.
[52]RGANI, f. 5, o. 64, d. 433, l. 178.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press

The unwillingness of other CMEA countries to invest in infrastructural development was something of a common pattern. In the calculations of planners, infrastructure costs made many deposits economically non-viable. Considering extraction as large-scale development, the initial enthusiasm of CMEA officials quickly faded. Implied development of the territories was one of the reasons for cancelling projects. Mineral prices were another issue. Mongolians were obliged to sell metals at prices higher than the global market. Talking to the GDR delegation, Mongolia's leader made it clear that gold in Mongolia could not be mined at the world market price: 'The world market prices are a speculative price set by the imperialists. It is clear to the GDR that gold from Mongolia will be more expensive.'[53] The GDR officials instead opted to seek non-ferrous metals on the global market.[54]

Erdenet mining single-industry city

Among all the deposits discovered by CMEA expeditions, the Erdenetiin-Ovoo copper and molybdenum deposit was the biggest one. Explorations started in 1963, when a joint Soviet–Mongolian geological expedition arrived in the region. Further geological explorations in the area were carried out by Czechoslovak and Mongolian missions in 1967–68 (Figure 4).[55] Geologists suggested the mountain was composed entirely of copper and molybdenum ore and estimated a significant potential for extraction. However, the challenges associated with the extraction of copper in Erdenet were similar to that of other deposits in Mongolia. The Erdenetiin-Ovoo deposit was located in a remote place, away from any of the existing urban centres in the open steppe with no communications or infrastructure. There was no road connection and the closest railroad was located 170 km away from the site, in the city of Darkhan. Additional difficulties arose due to lack of fresh water sources in the area. Due to the lack of adequate infrastructure, the project presented major challenges. As in the case of other settlements, the extraction of the deposit would require a tremendous effort to develop a fully sustainable city with all types of essential infrastructure.

Following joint mineral procurement, extraction was supposed to be organized at the CMEA level, with several Eastern European countries hoping to join the development. Possible ways of extracting the deposit were discussed in CMEA institutions. The PCM was entrusted with the preparation, in 1973, of the 'preliminary proposals to the interested CMEA-countries about the possibility of building a copper smelter on the basis of the planned production of copper molybdenum at Erdenetiin-Ovoo'.[56] The question was to be discussed at the CMEA annual meeting. In 1973, Bulgaria, which also focused on searching for copper and molybdenum 'insisted on participation' in the development of the Erdenetiin-Ovoo deposit. The Bulgarian leader, Todor Zhivkov, named participation in the project as a precondition for restructuring Bulgarian external loans and further investments in projects in Mongolia. However, instead of the promises about co-operative development in the

[53]BArch, DC20-11867, 5–6.
[54]BArch, DC20-5350, 161.
[55]RGAE, f. 4372, o. 66, d. 5704, l. 52.
[56]RGAE, f. 561, o. 25, d. 385, l. 3–4.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press



Figure 4. A group of Czechoslovak geologists conducting explorations in the Erdenet Valley (Erdenetiin-Ovoo) in 1968.
Source: Erdenet Mining Museum, Erdenet.

interests of the bloc, the involvement of smaller CMEA countries in Erdenet never happened. Rather, it was developed solely with Soviet assistance, when Soviet and Mongolian officials signed an agreement to co-operate on economic and technical exploration for the deposit, founding a bilateral Soviet–Mongolian enterprise.[57] While the exact reason is not clear, it is possible to speculate that the Soviet officials were increasingly dissatisfied with the way multilateral co-operation in Mongolia was going, involving significant asymmetry across participating countries.[58] More broadly, in the 1970s, Soviet leaders experienced increasing disillusionment with CMEA multilateral grand designs, instead focusing on pursuing individual interests.[59] In any case, the Soviets retained control of the largest extraction facility and intended to channel the extracted products to the Soviet Union. According to the intergovernmental Soviet–Mongolian agreement, both sides would co-operate on the economic and technical exploration for the deposit, developing Erdenet as a joint enterprise.[60] The agreement explicitly mentioned that the project included development of external communications, namely railways and highways, power lines with substations and external communications facilities.[61]

[57]Chekashev, *Dela i Ludi*, 20.
[58]See Erofeev, 'Complementary assistance'; M. Trecker, 'The "grapes of cooperation"? Bulgarian and East German plans to build a Syrian cement industry from scratch', in A. Calori, A. Hartmetz, B. Kocsev, J. Mark and J. Zofka (eds.), *Between East and South* (Berlin and Boston, MA, 2019), 33–58.
[59]Mark and Betts, *Socialism Goes Global*, 96–9.
[60]Chekashev, *Dela i Ludi*, 20.
[61]RGAE, f. 573, o. 1, d. 220, l. 29.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press

The Soviet planning institute Giprotsvetmet (State Institute for the Design of Non-Ferrous Metallurgy Enterprises), subordinated to the Ministry of Non-Ferrous Metals, was put in charge of planning the extractive site as a general contractor. Initially, Giprotsvetmet organized a new geological expedition to confirm earlier estimates of minerals located in the area. In 1971, Soviet geologists confirmed the location of copper. According to their estimates, the region's deposits could even exceed initial expectations: in addition to proven copper reserves, the deposit could contain up to 3 million tons of copper.[62]

From the beginning, Erdenet was planned as a large-scale urban development organized around an industrial mining facility. In 1971, Giprotsvetmet started developing a project for the site. In order to organize high-volume extraction, planners designed an enterprise capable of processing 8–13 million tons of ore per year. The complex consisted of an open-pit mine and mining-processing plant as well as a large number of other auxiliary plants: administrative buildings, service facilities, a tailings dam for storing byproducts of mining operations and others.[63] All industrial facilities were located at a combined site, located north-east of the quarry.[64] Giprotsvetmet estimated that extraction of the deposit would require a factory with at least 1,785 operators. To accommodate them and supply them with everything they needed, the initial size of the residential district was estimated for at least 2,450 people.[65] Accordingly, Giprotsvetmet designed a residential area in the vicinity of the enterprise, with housing, administrative and public facilities and a range of social services such as schools, kindergartens and recreational facilities.

The whole complex was designed as a self-sufficient, mono-industrial town, provided with power lines, water supply and heating. These required infrastructures constituted the major challenge of the project. A railway was crucial for both carrying out construction of the city and running the factory. The planners designed a new line, connecting Erdenet to the closest existing line, which was located 169 km away and ran from Darkhan.[66] Water supply posed another serious challenge. Planners urged the Mongolian side to search for any sources of fresh water in the region. For lack of local sources, supplying water would involve laying 64 km of pipes up to the Orkhon river.[67] Another major concern in planning was ensuring sufficient energy provision for the plant. Mongolia lacked energy-generating capacities to meet the peak consumption of the mining-processing plant of over 80 MWs. Moreover, the organization of construction operations required the development of local sources of building materials, including quarries for the supply of stone and sand.[68] The organization of such a large construction project would involve the efforts of at least 10,000 workers. Worker settlements had to be developed to house them. Hence, in the vision of Giprotsvetmet, extraction became a major urban development project. The planners perceived the facility as the central node in the planning of the whole industrial mining complex; the parameters of all other objects were related to

[62]RGAE, f. 4372, o. 66, d. 5704, l. 17. The deposit zone or around 25 km could contain a total of 9 million tons of copper: Chekashev, *Dela i Ludi*, 17.

[63]RGAE, f. 4372, o. 66, d. 5704, l. 17–19.

[64]*Ibid.*, l. 20.

[65]*Ibid.*, l. 101.

[66]*Ibid.*, l. 20.

[67]RGAE, f. 573, o. 1, d. 220, l. 16.

[68]*Ibid.*, l. 18.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press



Figure 5. Erdenet mining processing plant, 1978.
Source: RGAE, f. 573, o. 1, d. 229, l. 40.

it. Extraction was the overall priority of the project, and the parameters of other facilities and urban space around it were decided by the requirements of the mine and ore-processing plant (Figure 5).

Extractive capacity was crucial for estimating the duration of the pay-off period of the mining enterprise. Initially, Giprotsvetmet was ordered to develop two versions of the plant: the first one for the extraction of between 8 and 13 million tons of ore yearly, and the second for between 10 and 16 million tons. However, upon evaluation, the institute proposed developing an additional version *a proprio moto*, almost doubling the initial capacity up to 14–22 million tons.[69] The version with the most aggressive extraction capacity turned out to be the more efficient, promising the shortest pay-back period. This last version was the one recommended by the commission for construction as it generated the most profit, and it was eventually adopted for implementation.[70]

Despite all the optimizations, developing a novel city on a greenfield site was an extremely expensive project. The price was estimated to be 370 million rubbles for the initial period of 1973–79, in which the plant was projected to be made operable.[71] Infrastructure was the costliest article of expenditures. Constructing a town in the middle of the open steppe raised infrastructure prices significantly.[72] The development of infrastructure was not limited to a singular investment, but

[69]*Ibid.*, l. 17.
[70]*Ibid.*, l. 104.
[71]*Ibid.*, l. 80.
[72]It required capital investments of 74 million in valuta rubbles, or 548 million tugriks.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press

required constant maintenance, which itself involved a workforce of around 600 operating personnel.[73] Significant additional costs included the investments in 'pioneer services' associated with the initial development of the region, and organization of a construction base on the greenfield site.[74] This base consisted of temporary structures to house workers, including prefabricated barracks and temporary administrative and public facilities.[75]

Logistical infrastructure itself constituted a significant urbanizing force. A 170-km rail line was a significant project for urbanization, as it involved the construction of stations and smaller settlements along its way. A major one located at the Salakhit station near Darkhan was developed for the employees of the railroad and workers responsible for the operation of the railroad.[76]

The urban development of Mongolia was co-ordinated by Soviet experts, as Erdenet was integrated into the long-term plans for the development of the country. Infrastructure planning was inseparable from the 25-year plan for regional territorial development, and, more broadly, from the overall goals of the country. The planning of the different types of infrastructure in Erdenet foregrounded the questions of developing and linking national and international infrastructure networks and markets. The major question was how to meet the power requirements of the plant, since the Mongolian power system was incapable of supplying enough power. The projected peak energy consumption of the plant was up to 80 MWs, with a possible further extension to 105 MWs.[77] Even the basic requirement of the Erdenet plant surpassed the capacity of all existing Mongolian power stations combined. At the time, the largest Mongolian power plant in the capital had the capacity of only 60 MWs.[78]

Planners saw the development of Erdenet involving Mongolia's own generating capacity. According to this plan, the Mongolian energy system would be extended by increasing the capacity of the power station in the capital, and developing the second largest one in Darkhan. This was a long-term endeavour, an investment which correlated with the development of the productive forces of the country for 10–15 years, to be achieved only by the end of the 1980s. In the meantime, Soviet planners offered a temporary but robust solution, capable of providing energy in the short term, by organizing the supply to come from the Soviet Union. This method involved the construction of 430 km of power lines to link Erdenet to the Gusinoozerskaia power plant in southern Siberia. According to this proposal, Mongolia would be integrated into the Soviet unified energy system.[79] Despite the fact that planners declared the development of Mongolia's own electricity generation capacities a priority, they opted for the decision to supply electric power from the Soviet Union as a temporary plan.[80] Apart from Erdenet, the Soviet Gusinoozerskaia power plant

[73]RGAE, f. 573, o. 1, d. 220, l. 29.

[74]3% of the total costs were reserved for site preparation and development of the 'pioneering base'. RGAE, f. 4372, o. 66, d. 5704, l. 81.

[75]*Ibid.*, l. 88.

[76]Rossiiskii gosudarstvennyi arkhiv nauchno-tekhnicheskoi dokumentatsii (RGANTD), f. P-571 o. 5–4, d. 167, l. 15.

[77]RGAE, f. 4372, o. 66, d. 5704, l. 68a

[78]The total capacity of all Mongolian power stations combined was around 88 MWs. *Ibid.*

[79]*Ibid.*, l. 69.

[80]RGAE, f. 573, o. 1, d. 220, l. 18.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press

served as a power provider for other urban projects in northern Mongolia, reinforcing energy dependency on the Soviet Union.

The question of the provision of housing in Erdenet also brought to the forefront the issues of dependencies in Erdenet with the planning of industrial development on a national scale. Planners discussed several ways of providing housing in Erdenet, which involved using brick construction methods and transporting temporary prefabricated components to the site. While 'traditional' brick methods were probably an easier way of housing Erdenet workers, planners were inclined to use prefabricated housing delivery systems.[81] The decision to rely on prefabricated housing delivery was justified by the Soviet model of development and responded to the general Soviet policies of urbanization and sedentarization of Mongolia's population.[82] Industrial housing delivery in Mongolia was planned as an integrated network of house-building factories distributed around the country. Erdenet was integrated into this vision. Instead of building a local house-building factory, planners decided to locate it 170 km away in Darkhan. Darkhan was another major urbanization project, developed with extensive assistance from the Soviet Union and other CMEA countries.[83] Initially, housing delivery in Darkhan had relied on the capacities of a house-building factory located in the capital. However, when faced with increased need for housing in Erdenet, planners suggested developing Darkhan into a separate centre for housing materials, covering not only its own needs, but supplying housing for neighbouring cities.

The house-building factory in Darkhan was in itself a large-scale development. It consisted of multiple workshops, including a concrete mixing plant, moulding plants for the production of panels of external and internal walls, ceilings and partitions, a reinforcement plant, an electromechanical plant, a department for the production of finishing materials and components, administrative buildings and warehouses. Housing delivery in Erdenet correlated with the major upgrade of the housing delivery technology on the scale of the whole country. The Moscow-based institute TsNIIEP developed a new housing typology, 92UB, to upgrade housing production at the factories both in the capital and in Darkhan. The house-building factory in Darkhan started operation in 1977. It was capable of delivering 34–44 buildings, covering the need for housing both for Erdenet and Darkhan. Panels were transported to Erdenet over a newly constructed road linking the two cities. The supply of panels was not limited to Erdenet. The factory supplied panels for housing at other mining sites, among them a settlement at the Baganuur coal mine in Mongolia.[84]

The infrastructural dependencies in Erdenet were not limited to power supply or housing. Other types of infrastructure and services were dependent on the Soviet Union as well. For example, discussing the involvement of machines, the planners decided to carry out major repairs of dump trucks, their components and assemblies

[81]RGANTD, f. P-571, o. 5–4, d. 167.

[82]See E. Endicott, *A History of Land Use in Mongolia: The Thirteenth Century to the Present* (New York and Basingstoke, 2012), 65–85.

[83]On Darkhan, see N. Erofeev, 'Building the space of internationalism: socialist assistance to Mongolia in the 1950s–70s', in M. Cola and P. Betts (eds.), *Rethinking Socialist Space in the Twentieth Century* (London, 2024), 159–83.

[84]B. Badral, 'Domostroitel′nyi Kombinat v Darkhane – Dar SSSR', *Ekonomicheskoe sotrudnichestvo stranchlenov SEV*, 5 (1981), 87–8.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press



Figure 6. Meeting in the main building dedicated to the launch of the Erdenet mining and processing plant, 1978.
Source: RGAE, f. 573, o. 1, d. 229, l. 12.

and other large mining equipment in the USSR.[85] The promises to develop domestic infrastructure never were fully fulfilled. Mongolia's dependence on Soviet electricity continued until the end of the socialist period.[86]

The Erdenet mining facility was finally launched in 1978. The grand opening ceremony featured the ore-processing equipment and finished with the shipment of first batch of copper and molybdenum concentrate. Carried by a locomotive decorated with the portraits of Leonid Brezhnev and Tsedenbal by the newly constructed rail line, the copper was dispatched to the USSR (Figure 6). Thus, the grand opening demonstrated the functioning of the whole system of extraction, including mining, processing and use of logistic infrastructure for export of raw materials. According to geographer Martín Arboleda, the spaces of mining are not limited to the site of extraction but also include logistical infrastructure, storage facilities and processing plants representing a sprawling transnational infrastructure.[87] Following capitalism's extractive logics, these logistical infrastructures have served as 'tools of empire', opening the previously inaccessible regions of countries to global capital and facilitating the extraction of resources in the interests of imperial centres. Development of Erdenet followed a not wholly dissimilar logic. At least four branches of the railroad

[85]RGAE, f. 4372, o. 66, d. 5704, l. 20.
[86]*Mineral Industries of Asia and the Pacific*, 259.
[87]M. Arboleda, *Planetary Mine: Territories of Extract under Late Capitalism* (London, 2020).

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press

built in Mongolia with CMEA assistance were connected to various mines, which shipped their end products to the investor countries.[88]

After putting the mining-processing plant into operation, Erdenet became home for the ever-expanding workforce of plant operators. This mostly foreign workforce expanded with time. As dormitories and barracks constructed in the first 'pioneering' stage of the development were being replaced with permanent housing estates, specialists working at the site were able to bring their families to the city.[89] Mongolian citizens moved to the town and found jobs alongside Soviet citizens, who numbered one quarter of the town's population. By 1980, 16,000 square metres of housing was delivered to Erdenet and the population of the city expanded up to 45,000 people.[90] It prompted planners to revise the general plan to deliver an additional 42,000 square metres of housing in Erdenet.[91] As the city rapidly expanded, it acquired new functions. A factory 'Erdenet Carpet' was established in 1981 for the production of carpets and wool products,[92] along with facilities for food production, banking, construction and trade services. By the end of the Soviet period, Erdenet was not just a mining town, but a fully functional city. Nowadays, gradual expansion continues with diminishing Soviet influence after the selling of the Erdenet mining enterprise to the Mongolian Erel corporation in 2016.[93]

Conclusion

The procurement activities that Mongolia launched with the assistance of CMEA countries after 1962 uncovered hundreds of mineral deposits across the country. However, several decades of procurement and exploitation of specific deposits yielded very limited results. Despite discussions of the extraction of tungsten, copper and molybdenum on a bilateral and CMEA level, few mining operations were organized in socialist Mongolia. Socialist planners saw mining operations as a single-industry urban project, which required significant investments in infrastructure and the country's territorial development, making urbanization the major challenge in organizing extraction operations. Of the many deposits discovered, only one was developed into a fully fledged, permanent city – Erdenet – which eventually became the country's third largest urban centre. It represented a landmark project, which was integrated into the country's development plans. Yet, such value-maximizing approaches to industrial extraction and large-scale urbanization resulted in the fact that only major deposits were developed, while many smaller deposits remained unextracted. The higher prices of minerals for trade in the socialist bloc played an undeniable role.

The pattern of socialist resource extraction was radically different from the post-socialist practices of resource extraction in the country. After the collapse of the Soviet bloc, mining in Mongolia has been characterized by the rampant rise of artisanal mining activity, known as 'ninja mining'. Artisanal mining consists of

[88]*Mineral Industries of Asia and the Pacific*, 259.

[89]Chekashev, *Dela i Ludi*, 42.

[90]Badral, 'Domostroitel′nyi Kombinat v Darkhane', 87–8.

[91]RGAE, f. 31, o. 1–5, d. 7342, l. 2.

[92]E. Carpet, 'Our History', http://www.carpet.mn/timeline accessed 29 Aug. 2025.

[93]S. Radchenko and L. Erdene, 'The mysterious sale of Mongolia's Erdenet mine', *The Diplomat*, 9 Jul. 2016.

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press

small-scale mining operations often conducted by individuals or small groups using basic tools and techniques with minimal or no mechanization. Miners arrive to deposits by off-road vehicles, and use traditional Mongolian movable housing known as *gers*. 'Ninja mining' created a major 'gold rush' in post-socialist Mongolia, and it is still on the rise. Mette High argues that informal mining is a largely post-socialist phenomenon, since 'there were apparently very few informal-sector miners at the time – if any at all'.[94]

The unwillingness of socialist planners to invest in the deposits does not imply that they were necessarily unprofitable. Mongolian natural resources became available to the global market after the collapse of the Soviet bloc. In post-socialist times, major global mining corporations flocked to Mongolia in search of profits and the chance of expanding to new markets. Many of the deposits discovered in the socialist period were developed with these companies. Boroo gold mine, which had been discussed by the GDR since 1955, was eventually developed in 1997 by the Canadian mining company Centerra Gold, and Oyu Tolgol mine by subsidiaries of the Rio Tinto Group. Territorial development patterns promoted by these companies often contrast starkly with the approach of the socialist planners. Rotational workers' settlements in the vicinity of a plant were a common feature of resource development in the West, and often these settlements never developed into towns or cities.[95]

[94]High, *Fear and Fortune*, 10.

[95]J. Ferguson, *Expectations of Modernity: Myths and Meanings of Urban Life on the Zambian Copperbelt* (Berkeley and London, 1999); A. Vergara, *Copper Workers, International Business, and Domestic Politics in Cold War Chile* (University Park, PA, 2008), p. 41.

Cite this article: Erofeev, N. (2025). Extractive assistance: copper mining, socialist development and urban planning in Mongolia, 1962–1983. *Urban History*, 1–19, doi:10.1017/S0963926825100370

https://doi.org/10.1017/S0963926825100370 Published online by Cambridge University Press