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ARTICLE

Fraught friendships: East German experts, communist development, and environment in Mongolia during the Cold War

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Abstract

This article examines East German experts' participation in development projects in Mongolia and their conceptions of environments during the Cold War. Starting in the 1950s, East Germany (German Democratic Republic, GDR) and Mongolia intensified economic ties that aimed to industrialise Mongolia and align with communist objectives. The endeavours were intended to provide development aid, though they also provided the GDR with access to natural resources it could not obtain domestically. Drawing on sources from numerous German archives, this article argues that East German development projects followed broader patterns of exploitation and consumption between Europe and the Global South after the Second World War. Communist trade relations dissolved with the end of the Cold War, but they set the stage for trade and environmental impacts that have continued to this day.

Keywords: East Germany; Mongolia; communism; economic development; environment; Cold War; extraction; mining; agriculture

In 1961, the state-run East German and Mongolian film studios co-produced *The Golden Yurt*, a 'Mongolian fairytale' set and filmed in Mongolia. The film tells the story of three brothers who discover that their father is hiding a mysterious chest. The elder two believe the chest is filled with gold and jewels, and they open it out of greed. The beautiful valley in which they live floods, the earth withers, and people and animals start to die of thirst. The younger brother sets out to seek the advice of a wise nomad to resolve the situation.[1] While *The Golden Yurt* can be interpreted as a warning against greed and the resulting environmental devastation, viewers also absorb other messages. Visual cues suggest that Mongolia is a large open space with few inhabitants. Long camera shots of mountains, empty deserts, and open valleys with a single, solitary yurt confirm that Mongolia is a virtually untouched land with a small population and unrealised potential. Viewers are invited to read the landscape as needing socialism to overcome Mongolia's environmental lot and mystical, backward ways to become 'modern'.[2]

With Soviet encouragement, East Germany established relations with Mongolia on 13 April 1950, just months after the founding of the German Democratic Republic (GDR).[3] From a

[1]Rabschaa Dordschpalam and Gottfried Kolditz, 'Die Goldene Jurte', 1961. Synopsis provided by the DEFA Film Library, accessed 20 January 2022, https://ecommerce.umass.edu/defa/film/4796.

[2]Orhon Myadar, *Mobility and Displacement: Nomadism, Identity, and Postcolonial Narratives in Mongolia* (Taylor & Francis Group, 2020), 13–14.

[3]'Die Republik der Weidegründe', *Berliner Zeitung*, 15 April 1950, 1.

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communist perspective, the new connection benefited all three parties. It aided Mongolian development, supported East Germany's search for natural resources, and strengthened the Council for Mutual Economic Assistance (Comecon), the multilateral, Soviet-led economic partnership that Mongolia joined in 1962.[4] As 'socialist brother states', this relationship was supposed to be mutually beneficial, if not benevolent on the part of the GDR.[5] Mongolia had been under communist control since 1921 but was far less industrialised than the GDR, and until the 1950s, still largely nomadic. Central to this relationship was the GDR's imparting of scientific knowledge and expertise in a range of fields, including geology, mining, agriculture, and animal husbandry.[6] While advocates on both sides touted the advantages of this cooperation, a deeper investigation of East German activities reveals a more complicated series of developmental and environmental relationships. This article asks how East German conceptions of the environment and modernisation informed Mongolia's economic transformation under communism. How does the case of East German development in Mongolia expand our understanding of Cold War environmental relations?

The GDR's interest in Mongolia's economy and natural resources reflects a broader pattern of global interconnectedness during the Cold War.[7] In particular, the GDR's activities fit with the many development projects that eastern European states pursued in the Global South.[8] Several studies have emphasised communist actors' work around the world and the variety of socialisms post-colonial leaders envisioned.[9] Despite the importance of these projects in transforming countries in the Global South, this literature has paid relatively little attention to their environmental impact, focusing instead on cultural exchanges, training programmes, and socialisation.[10] From another angle, a growing body of literature on environmental history after the

[4]Dr Werner Titel, 'Konzeption zum Beginn der Verhandlungen', 29 October 1968, DC 20/19033, Bundesarchiv Berlin-Lichterfelde (hereafter, BArch). For more on tensions and transnational identity in the Comecon, see Simon Godard, 'Creative Tension: The Role of Conflict in Shaping Transnational Identity at Comecon', *Comparativ: Zeitschrift für Globalgeschichte und vergleichende Gesellschaftsforschung*, 27, no. 5/6 (2017): 65–83.

[5]'Gemeinsam werden wichtige Projekte verwirklicht: Erich Honecker sprach in Ulan-Bator auf dem Meeting', *Berliner Zeitung*, 13 October 1973, 3.

[6]For more on the nature of experts in communist eastern Europe, see Jiří Janáč, 'Building Hydrosocialism in Czechoslovakia. Reconfiguring Nature: Resource Security and the Limits of Expert Knowledge', *Global Environment* 13, no. 3 (2020): 610–33.

[7]Sebastian Conrad, *What Is Global History?* (Princeton University Press, 2016), 1–2. Stefanie Gänger and Jürgen Osterhammel, 'Introduction: Rethinking History, Globally', in *Rethinking Global History*, ed. Stefanie Gänger and Jürgen Osterhammel (Cambridge University Press, 2024), 3–5.

[8]For Soviet interactions in the communist and nonaligned worlds, see Tobias Rupprecht, *Soviet Internationalism after Stalin: Interaction and Exchange between the USSR and Latin America during the Cold War* (Cambridge University Press, 2015); Alessandro Iandolo, *Arrested Development: The Soviet Union in Ghana, Guinea, and Mali, 1955–1968* (Cornell University Press, 2022); Max Trecker, *Red Money for the Global South: East–South Economic Relations in the Cold War* (Routledge, 2020). For a broader history of development after the Second World War, see Sara Lorenzini, *Global Development: A Cold War History* (Princeton University Press, 2019).

[9]Eric Burton, 'From Convergence to Divergence: Mozambique's Failed Campaign to Join the CMEA and the Reconfiguration of East–South Relations', *Cold War History* 25, no. 3 (2023): 423–45. Burton decentres the Soviet Union and recentres voices from Eastern Europe and the Global South through a case study of Mozambique. An extensive body of scholarship examines Eastern Europe–Global South connections, especially—but not exclusively—between the Soviet bloc in Eastern Europe and other socialist or non-aligned countries; Young-Sun Hong, *Cold War Germany, the Third World, and the Global Humanitarian Regime* (Cambridge University Press, 2015); Andrew Kloiber, *Coffee, East Germans and the Cold War, 1945–1990* (Berghahn Books, 2022); Su Lin Lewis and Nana Osei-Opare, eds., *Socialism, Internationalism, and Development in the Third World: Envisioning Modernity in the Era of Decolonization* (Bloomsbury, 2024); Christina Schwenkel, *Building Socialism: The Afterlife of East German Architecture in Urban Vietnam* (Duke University Press, 2020); Łukasz Stanek, *Architecture in Global Socialism: Eastern Europe, West Africa, and the Middle East in the Cold War* (Princeton University Press, 2020); Berthold Unfried, *'Entwicklungshilfe' und 'Solidarität': Globalisierungsunternehmen in Zeiten der Systemkonkurrenz* (De Gruyter, 2024).

[10]Su Lin Lewis and Nana Osei-Opare's anthology tantalisingly nods in this direction, opening with a paraphrase of Rosa Luxemburg's critique that 'inhabitants of post-colonial states were born into exploitation … their lands were mined, fished,

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Second World War has largely excluded development projects between communist countries, especially when not looking at the Soviet Union.[11] J.R. McNeill's concept of the 'Great Acceleration' importantly highlights the dramatic expansion of energy, industry, and consumption after the Second World War.[12] McNeill's broad argument has been widely influential, yet intra-communist projects underscore the extent of human impact on the environment during the Cold War from a different perspective, incorporating them into a global conversation about geographic and economic interconnections.[13]

The case of East German projects in Mongolia integrates communist ambitions into that process of acceleratory extraction and consumption. Considering development history through the lens of environmental transformation offers a comparative *and* connected view of extractive practices within and across geopolitical systems. It emphasises the exploitative character that development projects, such as mining and industrial agriculture, could take on, even when acting in the name of solidarity. The GDR's constant drive to industrialise and acquire critical natural resources propelled it to pursue a range of projects at home and abroad. Through the hundreds, if not thousands, of experts that the GDR sent to Mongolia over the course of four decades—as well as Mongolians sent to the GDR for training—East Germans participated in the Great Acceleration.[14] The magnitude of these experts' endeavours was apparent in the changing landscapes as well as the economic restructuring, or 'modernisation', of a largely pastoral society into a more extractive and industrialised one. These policies rendered the country and the people more legible to local and international communist authorities and brought them into an 'alternative', socialist globalisation process.[15]

Cold War pressures, economic development, and self-interest fuelled unequal partnerships and exchanges between the GDR and Mongolia. East Germans' narratives focused on *their* solidarity and *their* expertise as central to Mongolian development, marginalising Mongolian voices. Nevertheless, if Mongolian voices are hard to hear in the East German archives, the actions and attitudes of Mongolian bureaucrats and labourers in mines and on collective farms complicate East German experts' narratives. Still, East German experts implicitly or explicitly viewed

and turned into monocrop economies', but it does not fully develop these questions. Su Lin Lewis and Nana Osei-Opare, 'Introduction: Development dreams from the socialist South', in *Socialism, Internationalism, and Development in the Third World: Envisioning Modernity in the Era of Decolonization*, ed. Su Lin Lewis and Nana Osei-Opare (Bloomsbury Academic, 2024), 1. For work on academic and cultural exchanges as well as socialisation, see Patryk Babiracki and Kenyon Zimmer, eds., *Cold War Crossings: International Travel and Exchange across the Soviet Bloc, 1940s–1960s* (Texas A&M University Press, 2014); Theodora K. Dragostinova, *The Cold War from the Margins: A Small Socialist State on the Global Cultural Scene* (Cornell University Press, 2021); Małgorzata Fidelis, *Imagining the World from Behind the Iron Curtain* (Oxford University Press, 2023); Elidor Mëhilli, *From Stalin to Mao: Albania and the Socialist World* (Cornell University Press, 2017); Sara Pugach, *African Students in East Germany, 1949–1975* (University of Michigan Press, 2022); Quinn Slobodian, ed., *Comrades of Color: East Germany in the Cold War World* (Berghahn Books, 2015).

[11]See, for example, Christopher Sneddon, *Concrete Revolution: Large Dams, Cold War Geopolitics, and the US Bureau of Reclamation* (University of Chicago, 2015). J.R. McNeill and Corinna R. Unger, eds., *Environmental Histories of the Cold War* (Cambridge University Press, 2010) provides a range environmental Cold War case studies but none between communist countries, or between them and the Global South. Numerous works examine communist industrialisation and its environmental impact in individual countries, such as Doubravka Olšáková, ed., *In the Name of the Great Work: Stalin's Plan for the Transformation of Nature and Its Impact in Eastern Europe* (Berghahn Books, 2016).

[12]J.R. McNeill and Peter Engelke, *The Great Acceleration: An Environmental History of the Anthropocene since 1945* (Harvard University Press, 2014).

[13]Simo Laakkonen, Viktor Pál, and Richard Tucker, 'The Cold War and Environmental History: Complementary Fields', *Cold War History* 16, no. 4 (2016): 377–94. Richard Drayton and David Motadel, 'Discussion: The Futures of Global History', *Journal of Global History* 13, no. 1 (2018): 1–21, 3.

[14]'Arbeitsplan für die Jahre 1986–1990 zum Vertrag über Freundschaft und Zusammenarbeit zwischen der Bergakademie Freiberg (BAF)/DDR und dem Mongolischen Polytechnischen Institut (MPI) Ulan-Bator', 3 March 1987, DIB 33, Universitätsarchiv der Technischen Universität Bergakademie Freiberg (hereafter, TUBAF).

[15]James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (Yale University Press, 1998), 2; James Mark, Artemy M. Kalinovsky, and Steffi Marung, 'Introduction', in *Alternative Globalizations: Eastern Europe and the Postcolonial World*, ed. Mark, Kalinovsky and Marung (Indiana University Press, 2020).

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Mongolia as a space of untapped possibility to develop, but also from which to benefit. Focusing on East German experts in Mongolia highlights the uneven power dynamics at play in these projects. It was they who exported mining and agricultural methods that introduced new environmental hazards. Even as the GDR introduced environmental protection measures at home, it exported modes of extraction and production—and all their related issues—to other parts of the communist world. The parallels in extractive practices across regimes and political systems place communist experts and their development projects into a larger continuity of resource exploitation between Europe and the Global South during the Cold War, with implications far beyond.[16]

Communist and environmental trajectories

East German environmental attitudes drew on German conservationism and Soviet-style communism's drive to harness nature for industrial production.[17] The East German state had to balance the need for natural resources to fuel its heavily industrialised economy and conservation. This tension remained at the heart of the GDR's growing economic and environmental problems throughout its existence, and as it engaged in development projects abroad, repeated them across the communist and non-aligned world. As East German experts began to visit and study Mongolia in the 1950s, the Mongolian People's Revolutionary Party (MPRP) was pushing a new wave of collectivisation and sedentarisation policies. It focused on a communist modernisation that prioritised materialist economic growth over environmental concern, an approach the East Germans also adopted as they plotted development projects there.

In the 1950s, the GDR was also navigating the tension between economy and ecology at home, as it rapidly rebuilt in the aftermath of the Second World War. As early as the 1954 Nature Conservation Law, the communist government acknowledged the country's shortage of natural resources. The law noted that nature should be 'destroyed no more than absolutely necessary', while also admitting that incursions were unavoidable.[18] The GDR's utilisation of natural resources applied to many industries, but of particular importance was mining. Germany had long been an expert in mining, and the GDR continued in that vein: uranium, coal, silver, potash, and more. The mining of lignite, or brown coal, fuelled the GDR. The coal was (and is) most easily accessed via open-pit mines, which quickly became an established fixture of the landscape. In the GDR era, the size and scale of the mining eclipsed earlier periods. The enormous mines were physically many times bigger than nearby villages, destabilised the ground, and lowered the local water table.[19] East German specialists had extensive expertise in mining a range of natural resources, including via open-pit mining, which they would draw on in their development projects abroad, too.

Yet by the late 1960s, experts acknowledged that industrial pollution was not only creating environmental and public health problems; it was also costing money. The vastness of the GDR's environmental degradation was exposed in a 1968 'prognosis report'. The primary author, Dr Werner Titel catalogued the extent of the pollution's impact on the GDR, both domestically and internationally. The environmental and public health consequences cost the state an enormous

[16]For example, see how Tiago Saraiva's *Fascist Pigs: Technoscientific Organisms and the History of Fascism* (The MIT Press, 2018), J.L. Anderson's *Capitalist Pigs: Pigs, Pork, and Power in America* (West Virginia University Press, 2019), and Thomas Fleischman's *Communist Pigs: An Animal History of East Germany's Rise and Fall* (University of Washington Press, 2020) together illuminate similarities in the production and consumption of pigs across political and economic systems.

[17]Thomas M. Lekan, *Imagining the Nation in Nature: Landscape Preservation and German Identity, 1885–1945* (Harvard University Press, 2009); Julia E. Ault, *Saving Nature under Socialism: Transnational Environmentalism in East Germany* (Cambridge University Press, 2021), 20.

[18]'Gesetz zur Erhaltung und Pflege der heimatlichen Natur vom 1954', 8 July 1954, DC 20/I/3/230, BArch.

[19]Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH, '10 Jahre Sanierungsbergbau mit Tagebaugroßgeräten' (2000), 196.

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amount of money.[20] Mining was particularly harmful, both in the extensive extraction of low-grade lignite coal that was dirty when burned, as well as the expansive open-pit mines that swallowed up towns and villages. Smoke, particulate matter, and gasses increased rates of respiratory illnesses. Polluted water and lowered water tables endangered both domestic consumption and industrial production. The prognosis report claimed that the social benefits of investing in environmental regulation were decidedly higher than the numbers alone indicated. Environmental protection was essential to the social contract between the state and its workers.[21]

Positions such as those in the prognosis report encouraged the creation of laws and institutions. Most notably, the 1968 version of the East German constitution included the 'right and responsibility to a clean environment'.[22] Shortly thereafter, the parliament passed a comprehensive conservation law (*Landeskulturgesetz*) in 1970 and approved the creation of the Ministry for Environmental Protection and Water Management (MUW) in 1972. In fact, Werner Titel was tipped to become the first minister of the MUW. In the 1960s, Titel had earned a doctorate in agricultural science, become a member of the People's Chamber, and was one of the many deputy chairs in the Council of Ministers. He was also deeply involved in writing the *Landeskulturgesetz* in 1969 and 1970. Titel died, unexpectedly, though, on Christmas Day 1971 at the age of 40.[23] When the MUW was formally established the following year, Dr Hans Reichelt was appointed to lead the ministry, a position he held until January 1990.[24]

The GDR's push for regulation at home emerged as part of a larger environmental moment in the late 1960s and early 1970s. Across Western Europe and North America (and elsewhere), environmental activism and legislation expanded dramatically. Sweden established a Conservation Agency in 1967.[25] The United States created the Environmental Protection Agency under President Richard Nixon. Numerous countries, especially Western democracies, passed environmental regulation laws. And there were a number of large, international conferences addressing the tensions between economic growth, the post-war population boom, and rising standards of living, on the one hand, and pollution and limited natural resources, on the other.[26] It is not surprising that the GDR wanted to be part of these conversations, especially given its constant desire for international recognition and diplomatic standing. Being part of an international movement for environmental protection made the GDR representative of, or even a leader among, the states it sought parity with.[27] The success of those efforts were another matter entirely; the GDR continued to suffer from extensive pollution throughout its existence.

At first glance, as leading environmental officials in the GDR, Titel and Reichelt appear disconnected from development projects in Mongolia. The purview of environmental officials in the GDR might not be obviously engaged with development abroad. Upon closer inspection, however, they were both intimately involved in relations with Mongolia, and more specifically its economic performance. They travelled to Mongolia as representatives of the East German state

[20]'Prognose: Industrielle Abprodukte und planmäßige Gestaltung einer sozialistischen Landeskultur in der DDR', 1968, DC 20-I/3/71, BArch.

[21]Ault, *Saving Nature under Socialism*, 38–9. 'Prognose', 7, DC 20-I/3/715, BArch.

[22]Artikel 15, Absatz 2, Verfassung der Deutschen Demokratischen Republik, 1968.

[23]'Dr. Werner Titel Verstorben', *Neues Deutschland*, 27 December 1971, 1. 'Mitteilung', 14 April 1975, DK 5/5155, BArch.

[24]'Reichelt, Hans. Kurzbiographie', 26 January 1972, DC 20/I-3/932, BArch. Tobias Huff, *Natur und Industrie im Sozialismus: Eine Umweltgeschichte der DDR* (Vandenhoeck & Rupprecht, 2015), 178. Huff suggests that the SED was not fully satisfied with Reichelt replacing Titel but had no better alternative.

[25]Joachim Radkau, *The Age of Ecology: A Global History*, trans. Patrick Camiller (Polity Press, 2014), 83. McNeill and Engelke, *The Great Acceleration*, 184–90.

[26]Michel Batisse, 'MAB at age 25', *UNESCO Courier* 46, no. 10 (October 1993); Donella H. Meadows et al., 'Foreward', in *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (Universe Books, 1972); Joachim Radkau, *Nature and Power: A Global History of the Environment* (Cambridge University Press, 2008), 269.

[27]William Glenn Gray, *Germany's Cold War: The Global Campaign to Isolate East Germany, 1949–1969* (University of North Carolina Press, 2003), 21–2.

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multiple times and served on the joint East German–Mongolian Economic Committee. In the late 1960s and until his death, Titel built up trade relations, focusing on gold, tungsten, collective farming, and meat packing.[28] After his death, Reichelt took over that responsibility for nearly the next two decades.[29] Given that high-level administrators in environmental regulation, such as Titel and Reichelt, were involved in trade and development negotiations with socialist and non-aligned countries, the lack of environmental discussion is all the more glaring. Only in the late 1980s did issues such as pollution start getting raised in the Comecon, and then primarily in the context of a 'Standing Committee on Environmental Protection'.[30] Whatever the domestic or European debate around pollution, it was even less discussed abroad.

Mongolia, by contrast, was not a highly industrialised state and was still overwhelmingly a pastoral, nomadic society. Having been a communist state since 1924, in the wake of the Russian Civil War, Mongolia received Soviet aid. As in the Soviet Union, disastrous attempts to collectivise in the 1930s had proven deadly for both humans and livestock. Instead, starting in 1953, communist leader Jaagin Tsedenbal pursued a less draconian version of collectivisation and sedentarisation.[31] Educated in the Soviet Union, Tsedenbal closely followed a technocratic Soviet model of development.[32] Now, sedentarisation primarily relied on economic pressures, though the threat of coercion was also there, essentially levying lower quotas and taxes on collectives than on private herds. Tsedenbal rationalised collectivisation as a means of improving 'the technical level of herding', which was Mongolia's main economic activity at the time.[33] This round of collectivisation was more effective, from a communist standpoint, than the first round in the 1930s. In 1953, when the push began, only 3 per cent of the country's livestock was held in *negdels* (collectives). By 1960s, almost all herders belonged to a *negdel*.[34] Economic considerations overrode discussions about the environment or sustainability of practices.

This effort to merge the main, traditional sector of the economy while making it more 'technical' and productive fitted in with Soviet-style modernisation. With collectivisation, the MPRP intensified efforts to expand and industrialise agriculture. As the political geographer Orhon Myadar has argued, sedentarisation and collectivisation were part of communist efforts to make Mongolian society legible.[35] At the MPRP's Fourteenth Party Congress in July 1961, Tsedenbal declared that Mongolia was on its way to becoming a 'country of agriculture and industry', showcasing the expansion of those two sectors in recent years.[36] In the next Five Year Plan, industrial production was focus on creating the basis for a 'modern metallurgical and machine industry'. The party further aimed for a threefold increase in the acreage of cultivated land for grain and to grow their herds by 11 per cent in the next plan, according to the Mongolian ambassador to East Berlin. Under Tsedenbal's direction, the country was leaving a nomadic feudalism behind in favour of a transition to communism, alongside 'other socialist peoples'.[37]

The MPRP's push for modernisation via collectivisation and industrialisation provided the GDR entrée into development agreements. Many of the first East German experts to visit

[28]'Vorschläge für das gemeinsame Protokoll—Teil Geologie', Correspondence between Dr Bochmann and Dr Titel, 24 October 1969, DC 20/19003, BArch; 'Protokoll über Beratungen der Vorsitzenden der beiden Sektionen des Ausschusses für wirtschaftliche und wissenschaftlich-technische Zusammenarbeit zwischen der Deutschen Demokratischen Republik und der Mongolischen Volksrepublik', 26 April 1971, DK 4/2578, BArch.

[29]Condolence letter from Chorlogijn Damdin to Ruth Titel, 26 December 1971, DC 20/19011, BArch.

[30]'Direktive—Erste Beratung des Zeitweiligen Arbeitsorgans der Ständigen Kommission Umweltschutz des RGW …', October 1988, DK 5/2281, BArch.

[31]David Christian, *A History of Russia, Central Asia and Mongolia*, vol. 2: *Inner Eurasia from the Mongol Empire to Today, 1260–2000* (Wiley Publishing, 2018), 425.

[32]Ohron Myadar, 'In the Soviet Shadow: Soviet Colonial Politics in Mongolia', *Inner Asia* 19, no. 1 (2017): 5–28, 17–18.

[33]Christian, *A History of Russia, Central Asia and Mongolia*, 481.

[34]Ibid., 482.

[35]Myadar, 'In the Soviet Shadow', 8, 20.

[36]'Die Mongolei auf dem Wege zum Industrie-Agrarland', *Aus der internationalen Arbeiterbewegung*, Nr. 14, 1961, 722.

[37]Gurshawyn Balshid, '40 Jahre seit dem Sieg der Mongolischen Volksrevolution', *Neues Deutschland*, 11 July 1961, 5.

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Mongolia were veterinarians and specialists in animal husbandry, who could provide insights into combatting diseases, cold, starvation, and other problems that herders faced.[38] In the 1960s, for example, the GDR sent eight veterinary medicine specialists and supported the construction of veterinary laboratories in the Selenge province.[39] After the *Dzud*, or harsh and snowy winter, of 1967–68 when 2.66 million head of livestock (including sheep, goats, cattle, horses, and camels) died, the GDR increased its veterinary attention to Mongolian herds.[40] From 1969 on, the GDR focused on sending experts who specialised in ectoparasites and larvae, particularly botflies, which infested the alimentary tracts of mammals and remained a perennial problem.[41] For a communist regime intent on raising production quotas for meats, furs, and more, keeping livestock healthy was essential.

As part of the industrial expansion of socialism, the MPRP accordingly devoted significant efforts to build up Mongolia's mining sector. The Soviet Union and Mongolian communists had created two joint mining companies in 1949, though Soviet experts had also conducted earlier expeditions in the country. The joint companies mined for fluorspar, tin, uranium, oil, and coal. In the 1970s, the Soviet Union built up copper mines at Erdenet, and by the 1980s, there were over 30,000 Soviet workers in Mongolia.[42] Germans, too, had seen the potential for mining Mongolia before the Second World War and taken note. In the 1920s, a German engineer, Fritz Weiske, had served as a geologist and 'director of the state mining' service, writing of the country's potential for mining to improve Mongolia's economic conditions.[43] It was in this context that East Germans inserted themselves into the country and these development projects, in the name of solidarity and for their own benefit.

The East German gaze on the Mongolian environment

As the GDR ramped up its involvement in Mongolia, visiting East German experts sought to better understand the environments in which they were to work. They marvelled at the foreign landscape and culture, seeking to apply familiar, Central European expectations to their new setting. The experts' impressions of Mongolia as a timeless, untouched space that was sparsely inhabited drew on the same tropes central to *The Golden Yurt*'s portrayal of the country as a vast territory that was full of economic potential. The lure of the unknown—and access to untold resources—motivated the GDR and its specialists to study the land and its possibilities, unintentionally mimicking patterns of the imperial powers that communist governments disdained.

An East German exploratory trip to Mongolia in 1957 focused on agriculture and animal husbandry, and the resulting reports revealed the experts' lack of basic knowledge about Mongolia. Over three weeks, Alfred Heinig and Walter Altenkirch, veterinarians specialising in cattle and sheep, respectively, travelled around Mongolia. They assessed the country's situation and acquainted themselves with the territory. In their report for officials at home, they provided basic information about climate, geography, natural resources, and economic performance. Despite focusing on animal husbandry and veterinarian science, Heinig and Altenkirch also highlighted

[38]'Bericht über die Handelsbeziehungen der Deutschen Demokratischen Republik und der Mongolischen Volksrepublik (MVR) im Jahre 1957', DL 2/5411, BArch.

[39]'Direktive für das Autreten der Expertendelegation zur Überprüfung der Möglichkeiten der technisch-ökonomischen Unterstützung auf dem Gebiet Landwirtschaft, Anlage 2', June 1969, DC 20/19008, BArch.

[40]Takahiro Tomita, '*Dzud* and the Industrialization of Pastoralism in Socialist Mongolia', *Journal of Contemporary East Asia Studies* 11, no. 1 (2022): 64–85, 67–8.

[41]'Bericht über den Aufenthalt einer Gruppe von Experten der Landwirtschaft aus der DDR in der MVR im Juni 1969', 38, DC 20/19008, BArch.

[42]Christian, *A History of Russia, Central Asia and Mongolia*, 483.

[43]Fritz Weiske, 'Die wirtschaftlichen Verhältnisse in der Äußeren Mongolei', *Osteuropa* 4, no. 3 (1928): 149–65, 149–50. 'Weiske, Fritz', Studienwerk Deutsches Leben in Ostasien e.V., accessed 1 July 2026, https://studeo-ostasiendeutsche.de/deutsche-in-ostasien/mongolei?view=article&id=1273:weiske-fritz&catid=29.

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the presence of precious minerals and metals.[44] The study explained, 'There are predominantly crystalline slate, basalt, and granite. The mountains are rich with valuable minerals in all parts of the country. Iron ore, manganese, some gold, a not insignificant occurrence of gypsum, also coal and crude petroleum are plentiful.'[45] These natural resources, along with tungsten, had the potential to be highly beneficial for the East German economy.[46]

In seeking to understand Mongolia, Altenkirch and Heinig attempted to categorise inhabitants and their relationship to both communism and their physical environments. They drew on a range of hierarchies but at the same time exposed their considerable confusion about how to classify the populations they encountered. The 'Mongolian race is composed of different nationalities', they wrote, 'but all of them speak their own Mongolian language', conflating European understandings of race, ethnicity, and nation. In addition, they identified a system of writing that goes from top to bottom and left to right, thus combining norms of both European and Asian languages.[47] According to Altenkirch and Heinig, 80 per cent of the population worked in animal husbandry or agriculture, were 'decidedly nomads', and were termed 'Arats'.[48] Before Mongolia became communist, Arat had referred to a certain group of herders with specific property and ownership relations. Because according to Marxist theory Mongolia had neither a proletariat nor a peasant class, Arat became 'the functional equivalent' in Mongolia, allowing Mongolians to be absorbed into Soviet understandings of class.[49]

Altenkirch and Heinig's reports made Mongolians and the landscapes more legible, so that East Germans could make both more profitable. They explained that 'A lot of enlightenment work is particularly necessary for the Arats, most importantly because one hears that up to 600,000 animals can die from natural catastrophes in a given year.'[50] While Altenkirch and Heinig reported on improvements for animal husbandry for the sake of the Mongolian economy, the GDR began to adopt plans for exporting meat from the country for East German consumption.[51] Their reports conveyed a scientific fascination that turned Mongolians into subjects of study and structured the role of East German experts as imparting both technical knowledge and communist education. These attitudes continued to permeate East German understandings of Mongolians in explicit and implicit ways as development projects ramped up in the 1950s and 1960s.

In a post–Second World War world of burgeoning consumption and keeping up with the West, East German leadership researched and pursued extractive opportunities abroad. Altenkirch and Heinig's reporting described Mongolia's landscape as a foreign other, which they had to learn about in order make it more economically productive. The 'endlessly large steppe' was home to more than 2000 species of plants, but it quickly became a deserted yellow in the dry season. The East German experts also related basics about the geography and climate of Mongolia, stating that 'The winter is very cold, and in turn the summer is very dry, and at times, very hot ... They say that Mongolia is a country of sunshine. The sun shines more than 200 days [per year].' Altenkirch and Heinig also commented on recent efforts to industrialise and sedentarise the economy, in

[44]Alfred Heinig and Walter Altenkirch, 'Bericht über eine Studienreise in die Mongolische Volksrepublik vom 2. 10. bis 31. 10. 1957', 1, DK 107/2764, BArch.

[45]Heinig and Altenkirch, 'Bericht über eine Studienreise', 1.

[46]'Niederschrift über die Beratung der Vorsitzenden der Sektionen des Wirtschaftsausschusses DDR/MVR, dem Stellvertreter des Vorsitzenden des Ministerrates der DDR, Dr. Reichelt, und dem Stellvertreter des Vorsitzenden des Ministerrates der MVR, D. Gomboshaw, am 20. Juli 1972 in Berlin', 31 July 1972, DK 5/4609, BArch. Hong, *Cold War Germany, the Third World, and the Global Humanitarian Regime*, 57.

[47]Heinig and Altenkirch, 'Bericht über eine Studienreise', 3.

[48]Ibid., 3, 10.

[49]Ines Stolpe, 'Social versus Spatial Mobility? Mongolia's Pastoralists in the Educational Development Discourse', *Social Inclusion* 4, no. 1 (2016): 19–31, 21.

[50]Heinig and Altenkirch, 'Bericht über eine Studienreise', 10–11.

[51]Lux, 'Erarbeitung einer Konzeption für das Fleischkombinat Ulan-Bator zur Verbesserung der Auslastung der vorhandenen Kapazität und zur Erreichung einer besseren Effektivität bis 1975', undated, 10, DK 5/4609, BArch.

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addition to as yet unfulfilled potential, noting 'The country and all of its problems have not yet been exhaustively explored or developed. Camel and oxen caravans still pull next to columns of trucks.'[52] East Germans thus initially perceived Mongolia as a frontier: an 'extraordinary and attractive' place with challenges but also untapped potential.[53]

The GDR's claim to offer expertise to Mongolia rested on its highly industrialised economy and robust performance among Soviet-aligned states. Outside of the Soviet Union, the GDR had the largest command economy and dubbed itself a 'display window' to socialism.[54] The GDR's extensive mining operations for coal lignite and potash, among other minerals, demonstrated the state's status as a highly capable partner for extractive projects. The 'Mining Academy' in Freiberg, Saxony had originally been founded in 1765, and held (and still holds) claims to being the oldest mineralogical technical school (*Hochschule*) in the world.[55] East German experts further touted their veterinary and industrial agricultural expertise, highlighting how their own animal and crop production had expanded dramatically since the founding of the GDR. Left unsaid was the GDR's increasing reliance on pesticides and fertilisers to maintain their impressive yields—and the water and soil pollution they caused.[56] East German delegations emphasised their ability to aid in extractive enterprises abroad in the name of socialist solidarity. Conspicuously ignored was the extent of the environmental damage these industries had wrought in the GDR.

Moreover, these projects in Mongolia benefited East German interests, even if profit was not explicitly stated as the motivation. As a relatively small country in terms of territory, the GDR lacked many of the natural resources it sought for consumption or industrialised production at home. As an East German official told a Soviet diplomat, the GDR carefully selected projects in Mongolia that would benefit the East German economy.[57] East German delegations and economic planners eagerly eyed Mongolian gold, tungsten, meat, skins, and wool among other products, though they often had a limited understanding of conditions on the ground. The situations that East German experts encountered in Mongolia did not always fit neatly into their economic plans. Mineral seams proved difficult or impossible to mine; lack of infrastructure slowed supplies and deliveries; and Mongolia's climate slowed projected production schedules. These obstacles complicated East German pursuits in Mongolia, both in terms of the aid experts were supposed provide as well as the intended return on investment for the GDR.

The GDR offered technical advice as well as credit to make the Mongolian economy more closely resemble its own (and the Soviet Union's). As the GDR considered how to proceed in credit negotiations with Mongolia, the East German representative Dr Werner Titel first met with the Soviet embassy in Ulaanbaatar to 'develop close contact with the relevant Soviet bodies, in order to ensure a shared position on cooperation with Mongolia'. The Soviet delegate welcomed the GDR's initiative in Mongolia, though he reminded Titel to make sure the arrangement kept in mind the structure and goals of the Comecon.[58] East German cooperation with Mongolia ramped up after the two countries renewed their friendship treaty in 1968. Over the next three years, the GDR devoted particular attention to projects in Mongolia, ahead of the fiftieth anniversary of the communist revolution in Mongolia in 1971.

[52]Heinig and Altenkirch, 'Bericht über eine Studienreise', 4.

[53]Ibid., 1.

[54]Hermann Wentker, *Außenpolitik in engen Grenzen: Die DDR im internationalen System, 1949–1989* (Oldenbourg, 2007), 6, 188.

[55]'Meilsteine der Geschichte: Ein geschichtlicher Abriss', accessed 1 July 2026, https://tu-freiberg.de/universitaet/geschichte/meilensteine-der-geschichte.

[56]Fleischman, *Communist Pigs*, 73.

[57]'Information für die Beratung des Vorsitzenden der DDR-Sektion des gemeinsamen Wirtschaftsausschusses DDR/MVR anläßlich der Vorsitzendengespräche im Juli 1972', 13 July 1972, DK 5/4609, BArch.

[58]'Vermerk über eine Konsultation im Staatlichen Komitee für Wirtschaftliche Zusammenarbeit der UdSSR zu Fragen der ökonomischen Zusammenarbeit der DDR und der UdSSR mit der MVR am 2.11.1968', DC 20/19033, BArch.

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All parties involved aimed to help Mongolia's progress from feudalism to socialism through intensive investment by that time.[59] These efforts matched similar approaches to development in China and other newly communist countries outside of Europe.[60] Hungary, Czechoslovakia, and other Soviet bloc states in Eastern Europe also undertook 'development' projects in Mongolia, especially those revolving around science and technology. The Soviet Union and Czechoslovakia promised to provide the equipment for eight laboratories and to train the necessary staff.[61] Hungary also completed mining expeditions for tungsten and other metals, though negotiations with Mongolia were nearly broken off after a disagreement over the share of the profits in 1971 (Mongolia wanted 40 per cent; Hungary was only prepared to share 15 per cent).[62] Poland, by contrast, felt compelled to send specialists but did not appreciate being pressured to send them. About a hundred Poles were working there in 1970, but Polish diplomats complained that the experts were needed at home, and that Poland could not afford to send them abroad for extended periods.[63]

The East German leadership—as with the other Comecon states and indeed Western nations similarly engaged in development work—did not view its arrangement with Mongolia as purely charitable. Reports clearly stated that credit without interest would not be allowed. The GDR went so far as to suggest that some of the East German credit be devoted to geological exploration, especially at Boroo and Narin-Tologoj, both of which held gold deposits.[64] Between 1966 and 1970, the GDR proposed to go from receiving 200 tons of gold to 600, an increase that the GDR promised to help facilitate with millions of rubles in credit to expand mining operations and survey for quartz reefs.[65] Additional East German credit was earmarked for building a rug factory and expanding a meat processing plant. Even these projects, however, were intended for East German consumption, because the GDR aimed to bring many of these resources and goods back to Europe. Moreover, they planned to sell East German finished products in Mongolia.[66] In 1970, the two countries formed a standing economic committee—the one on which both Titel and Reichelt sat—to facilitate these exchanges, underscoring their importance for both sides.

The practice of development and extraction

East German development projects in Mongolia reveal coordination among Soviet bloc states as well as deep-seated faith in science and technology to transform the Mongolian economy. They reflected Soviet and East German understandings of Marxist-Leninist modernisation, which emphasised industrialisation and implicitly sedentarisation—and applied them to an unfamiliar environment.[67] The instance of a gold mine at Boroo illuminates the tension between idealistic conceptions of development and the self-interest of the East German government with envi-

[59]'Kommunique über den offiziellen Freunschaftsbesuch einer Partei- und Regierungsdelegation der Mongolischen Volksrepublik in der Sowjetunion (Auszüge)', 11 April 1970, DC 20/19027, BArch.

[60]Austin Jersild, *The Sino-Soviet Alliance: An International History* (University of North Carolina Press, 2014), 12–13.

[61]Correspondence between Titel and Prey (Minister of Science and Technology), 21 December 1971, DK 5/4609, BArch.

[62]'Bericht über die ökonomische Zusammenarbeit zwischen der DDR und der MVR seit Mitte Januar 1971', 8 February 1971, DC 20/19027, BArch.

[63]'Niederschrift über ein Gespräch mit dem Handelrat der VRP, Gen. Sasinowski, am 20.3.1970 in der Botschaft der VRP', 23 March 1970, DC 20/19027, BArch.

[64]'Bericht über die ökonomische Zusammenarbeit zwischen der DDR und der MVR seit Mitte Januar 1971'.

[65]'Niederschrift über die Konsultation zwischen den Delegation der Staatlichen Plankommission der DDR und der Staatlichen Plankommission der MVR über die Hauptfragen der Wirtschaftsbeziehungen der DDR und der MVR, 1966–1970', 1964, 2–4, DE 1/39489, BArch.

[66]Ibid., 14.

[67]For more on (East) German faith in science and technology, see Dolores L. Augustine, *Red Prometheus: Engineering and Dictatorship in East Germany, 1945–1990* (MIT Press, 2007). For more on East German science and technology in relationship with socialist and non-aligned countries, see Pugach, *African Students in East Germany, 1949–1975*.

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ronmental impacts for workers and the landscape. The GDR expanded the operation that the Soviets had initiated in the 1940s and 1950s such that the East German experts operated in a complicated space amid Cold War hierarchies. In addition to mining operations, the GDR became heavily involved in the operation of a collective farm at Bornuur, subsidising beginning in 1968 and sharing East German industrial agricultural practices, in the wake of the MPRP's sedentarisation campaign of the 1950s.[68] The GDR profited from those relationships, through its control over technological knowledge and its extraction of resources and wealth, perpetuating problematic environmental policies widely deployed at home.[69]

The GDR invested in a gold mining operation at Boroo in the north of the country, a project that was valuable for both East Germans and Mongolians. Although the Soviets had surveyed and even mined in the region as early as the 1920s, and in the 1950s, the Soviet Union was rumoured to be no longer willing to supply the GDR's needs for gold. The East Germans also reached out to other socialist countries about the possibility of mining in those countries; Mongolia was the first to respond. From there, the GDR set out to survey parts of Mongolia known for gold deposits.[70] In 1961, the East German government sent an expedition to the area to assess the viability of mining in the area around Boroo as well as other places. Within about six weeks, the experts confirmed viability of the gold deposits and were moving ahead.[71] The GDR planned to use the gold for a range of purposes, domestically, including jewellery such as wedding rings and dental work. Mining of gold in Mongolia proved so advantageous that it was one of the few arenas in which the Federal Republic of Germany remained interested after unification in 1990.[72]

By 1965, in consultation with the Mongolian ministry of geology, the GDR had identified a multitude of logistics related to gold mining at Boroo.[73] The diplomatic considerations for expanding mining were numerous. The two states had to determine shares of the gold, for example, and who would supply what personnel. From there, the GDR decided which of its state-owned enterprises would be involved in the project, including what machinery and materiel to send, which specialists were suitable for this assignment (in terms of expertise and temperament), and what infrastructure to build to support the mining operation. VEB Nordhausen Schachtbau (NSB) was to be intimately involved with the designing and implementation of the mine while VVB Feste Minerale (Hard Minerals) would oversee prospecting and extracting the gold.[74] From there, the two sides had to agree on who received how much of the gold mined, or at what rates would the GDR receive it.

Conditions for East German specialists were difficult, especially in the early years, and the unfamiliar landscape challenged their work. Experts from NSB concluded that their 'assumptions and stipulations about the geological project did not correspond with local conditions. In particular this affects the scope and duration of the work as well as transport and materiel problems.'[75] Mongolian deputy minister and head geologist, Tshoishingijn Churz (by East German

[68]'Bericht Sicherung der Nachhaltigkeit der landwirtschaftlichen Produktion im Somon Bornuur', 1993, 11–12, B 213/55635, BArch, Koblenz.

[69]Michael Adas, *Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance* (Cornell University Press, 1989); Brett M. Bennet and Joseph M. Hodge, eds., *Science and Empire: Knowledge and Networks of Science across the British Empire, 1800–1970* (Palgrave McMillan, 2011); Ulrike Kirchberger and Brett M. Bennett, eds. *Environments of Empire: Networks and Agents of Ecological Change* (University of North Carolina Press, 2020).

[70]Aribert Kampe and Joachim Stübner, 'Vorbereitungsphase 1962 bis Frühjahr 1965', in *Auf Goldsuche in der Mongolei: Chronik der Geologenexpedition der DDR in der MVR*, ed. Joachim Stübner, Aribert Kampe, and Reinhard Schirm (Projekt Piccolo, 2005), 209.

[71]Ibid.

[72]'Entwicklungspolitische Zusammenarbeit mit der Mongolischen Volksrepublik', 11 October 1990, 10, 17, B 213/55629, BArch, Koblenz.

[73]Technically, the 'Ministry of Fuels, Energy Economy, and Geology'.

[74]'Bericht über die Befahrung der primären Goldlagerstätten in den Gebieten Dsuun-Mod und Boroo in der Zeit vom 18. Juni 1965 bis 9. August 1965', 2, DF 6/3794, BArch.

[75]Ibid., 19.

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spelling), spoke to this situation in an interview with East German and Soviet news outlets in 1973. Churz said, 'The MPR is rich in natural resources, yet the tremendous distances and weak transportation network create difficulties.' He proudly stated, though, that 'currently, nearly all Comecon member states have geologists working in the MPR'.[76] Mongolian geologists, such as Churz, who was trained in the Soviet Union, saw the potential windfall for the MPR in mining. Comecon and East German commitment to mining gold and other metals and minerals was strong, despite the apparent challenges they faced.

The extraction of the gold was typically done via open-pit mining, which polluted the soil and water. Waste from the mining as well as leftover sediment from extraction led to erosion, degradation of the earth's surface, in addition to issues with flooding and contamination of the ground water.[77] The potential environmental hazards of open-pit mining were very familiar to East German mining operations because that method was frequently used to mine low-grade lignite coal in the GDR, and the source of much popular frustration.[78] While Mongolia's low population density meant fewer human impacts for this type of mining, the environmental ones remained. In a country where water resources were (and are) limited, the protection and maintenance of them was critical. Through Comecon reports, the MPR's Administration for Water Management recognised the importance of maintaining clean water supplies, but it appears that mining was prioritised over protection.[79]

The process of separating gold from ore and refining it also posed risks for the workers and the environment, highlighting the overlap in working conditions and ecological impact. One serious concern surfaced in 1965, when a number of East German workers at Boroo were exposed to mercury in the refining process. Heating the gold ore and mercury in a smelter until the mercury is vapourised extracts the gold from the ore, but it discharges mercury into the air, polluting the air with highly toxic fumes.[80] In this case, the workers developed mercury poisoning, a condition that initially went undiagnosed by the expedition's doctor. Four of them were so sick with headaches, stomach aches, and light-headedness that they were sent to a hospital in Ulaanbaatar for treatment and further observation. One of the four later required further treatment back in the GDR.[81] Mercury further contaminated the Boroo River and the surrounding soil.[82] Though using mercury to extract gold from ore has been banned in Mongolia, the presence of mercury in water, soil, and biota remains an ongoing problem around Boroo.[83] Gold refining at Boroo also relied on the cyanide process to separate gold from the ore, which released cyanide into the air.[84] Boroo's mining operations leached heavy metals and other contaminates into the soil, water, and ultimately, into the food chain.[85]

[76]Valentin Scharow, I.N. Scharaw-isch, and Hugo Kröpelin, 'Kundeschafter in Friedlicher Mission: Sozialistische Integration zur Erforschung von Bodenschätzen', *Neues Deutschland*, 13 March 1973, 2.

[77]Zurgaadai Gombosuren, 'Erarbeitung von effektiven Abbau- und Rekultivierungsverfahren für den Goldbergbau in Seifenlagerstätten der Mongolei' (Doctorate diss., Technische Universität Bergakademie Freiberg, 2007), 177.

[78]Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH, '10 Jahre Sanierungsbergbau mit Tagebaugroßgeräten' (2000).

[79]Rat für Gegenseitige Wirtschaftshilfe, Sekretariat Gruppe Wasserwirtschaft, 'Analyse der gegenwärtigen Standes der Wasserwirtschaft in den Mitgliedsländern des RGW, ihre Entwicklungsprognose für den Zeitram 1971–1975 und die wichtigsten Tendenzen für den Zeitraum bis 1980', 1969, 34–5, DK 4 1908, BArch.

[80]'Environmental Performance Reviews: Mongolia', 2018, 356, United Nations Economic Commission for Europe (UN ECE). https://digitallibrary.un.org/record/3801233?v=pdf.

[81]Wolfgang Limpack, 'Zwei Jahre als Laborleiter in der Mongolischen Volksrepublik' in *Auf Goldsuche in der Mongolei: Chronik der Geologenexpedition der DDR in der MVR*, ed. Joachim Stübner, Aribert Kampe, and Reinhard Schirm (Projekt Piccolo, 2005), 88–9.

[82]Gombosuren, 'Erarbeitung von effektiven Abbau- und Rekultivierungsverfahren', 119–20.

[83]Ibid., 22. Yury G. Udodenko et al., 'Mercury Levels in Sediment, Fish and Macroinvertebrates of the Boroo River, Northern Mongolia, under the Legacy of Gold Mining', *Ecotoxicology* 31, no. 2 (2022): 312–23, 317.

[84]Dallmann and Wolf, 'Abschlußbericht zur Forschungsarbeit', January 1965, 7, 40075-1 2, Bergarchiv Sachsen, Freiberg.

[85]'Environmental Performance Reviews: Mongolia', 277.

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Despite these environmental impacts, as of the late 1960s, the GDR was exporting 200 kg of gold per year from Mongolia. Within a decade, experts anticipated exports of up to 600 kg of gold per annum. Later projections upped that number to 1,500 kg of gold per annum, 'at least half of which would be imported to the GDR'.[86] To help offset the cost of the operation, the GDR looked into forming a joint concern with other Comecon countries.[87] For the East Germans, though, Boroo was a decades-long investment that outlasted the GDR itself. They continued to mine (and at least partially refine) gold there through the 1980s, and in fact, expanded operations in 1987 and 1988. They even had plans to continue the operation through the year 2000, had the collapse of communism in the GDR and Mongolia not intervened.[88] The goldmine at Boroo outlasted the communist era and was privatised in the 1990s. In 2006, the mine was credited with raising the country's entire GDP by 5–7 per cent, though environmental concerns persisted, and it remained operational until 2017.[89] Gold mining around Boroo continues today.

Another East German development project at the collective farm 'Ernst Thälmann' in Bornuur, about 50 km from Boroo, introduced a different set of environmental problems. Building on the sedentarisation programme of the 1950s, which sought to settle nomadic communities on permanent agricultural holdings, the farm's objective was to provide a stable source of milk, meat, potatoes, and vegetables for the capital. It was also intended to model good—by East German standards—socialist forms of production, including a more mechanised and industrialised agriculture.[90] Given that Mongolia had lost large portions of its livestock in the 1960s from a shortage of fodder and cold temperatures, securing stable food for the herds was an important aspect of East German experts' work.[91] Yet, alongside rising productivity, East German experts exported practices known to degrade the environment, namely the extensive use of synthetic nitrogen fertilisers.[92] Thus, in addition to cultural and interpersonal complications, East German partnership brought negative long-term consequences for the land.

The cooperation faced a number of human challenges that complicated the relationship. In 1971, an East German delegation found that the collective farm 'did not leave a good impression', and though, the East German specialists' work must be highly regarded, they were 'not in a position to measurably improve the current conditions'. The delegation recommended that the Mongolian agriculture ministry exert more influence over the farm's leadership and that an expert trained in the GDR be assigned to work there, so someone could directly translate from German to Mongolian. At the time, 'the use of imperfect Russian on both sides considerably reduced the impact that GDR-specialists' had on the operation of the farm.[93] As the GDR became more involved at Ernst Thälmann, cultural expectations surrounding work as well as language barriers

[86]'Konzeption für die Entwicklung der wirtschaftlichen und wissenschaftlich-technischen Zusammenarbeit zwischen der DDR und der MVR im Zeitraum 1976–1980', 14 July 1970, DK 5/4609, BArch.

[87]'Niederschrift über die Beratung der Vorsitzenden der Sektionen des Wirtschaftsausschusses DDR/MVR, dem Stellvertreter des Vorsitzenden des Ministerrates der DDR, Dr. Reichelt und dem Stellvertreter des Vorsitzenden des Ministerrates der MV, D. Gomboshaw, am 20. Juli 1972 in Berlin', 4.

[88]'Vermerk über den Empfang des Mitglieds des Politbüros des ZK der SED und Vorsitzenden des Ministerrates der DDR, Genossen Willi Stoph, beim Generalsekretär des ZK der MRVP und Vorsitzenden des Präsidiums des Großen Volkshurals, Genossen Shambyn Batmunch, am 16.9.1987 im Hause des ZK der MRVP', 16 September 1987, DC 20 I-3/2528, BArch.

[89]'Mongolia', Foreign Service Office of Montsame News Agency, 2006, 7.

[90]'Niederschrift über ein Gespräch des Botschafters, Gen. Hüttenrauch, mit dem Botschafter der UdSSR, Gen. Schtschetinin, in der Botschaft der DDR am 13.3.69, 14.00 Uhr', 1 April 1969, DK 4/2578, BArch.

[91]'Niederschrift über die erste Konsultation zwischen den Planungsorganen über die Entwicklung der wissenschaftlich-technischen und wirtschaftlichen Zusammenarbeit zwischen der DDR und der MVR im Zeitraum 1971–1975', 10 February 1969, DK 4/2578, BArch.

[92]Fleischman, *Communist Pigs*, 85–7.

[93]'Bericht über die vom 24. bis 31. August 1971 in Ulan Bator geführten Verhandlungen zwischen Delegationen des Rates für landwirtschafliche Produktion und Nahrungsgüterwirtschaft der DDR und des Ministeriums für Landwirtschaft der Mongolischen Volksrepublik', 3, DK 4/2578, BArch.

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complicated the cooperation. Faulty Russian proved to be the lingua franca for East Germans and Mongolians, an example of the Soviet Union's hegemony over both countries.

Within a few years, though, these conditions improved, and production began to increase. The GDR promised to deliver 400 pregnant heifers to the farm once details about their care—and the care of the resulting calves—were resolved. East German diplomats deemed the work at Ernst Thälmann to be their most important task in the 1976–80 Five Year Plan.[94] Some 580 East German workers spent time at the collective farm between 1969 and 1990, helping to build greenhouses and storage facilities in order to expand production.[95] By the mid-1980s, Ernst Thälmann was Mongolia's most productive collective farm and a point of pride in the partnership between the two countries. East German leader Erich Honecker and his Mongolian counterpart even visited Bornuur in October 1986, with much fanfare in the East German press.[96] In *Neue Zeit*, a major East German newspaper, the collective farm was touted for its productivity. In addition to 1,300 milk cows, the farm supplied food to the capital, especially potatoes and vegetables which had not been available in Mongolia 'even a few decades ago'.[97]

East German experts worked with Mongolians to make the farms to look more like East German ones from crops to greenhouses to harvesting and more. East German sources noted that irrigated agriculture had only been introduced in Mongolia in the 1960s, as part of sedentarisation policies. They used materials—perhaps most notably, asbestos—that the GDR touted as being modern and the solution to any number of problems.[98] The irrigation systems relied on asbestos concrete (as well as steel) pipes.[99] Other buildings at the collective farm were also of East German design and used asbestos-laden materials, including roofing and ceiling panels. These structures included storage facility for potatoes.[100] While such construction had advantages, such as thermal insulation, as buildings and pipes degraded over time, Mongolians were exposed to asbestos and potentially developed a range of health complications, including mesothelioma.[101]

East German experts also introduced pesticides, herbicides, and fertilisers, which had disastrous repercussions over time in the GDR.[102] East German industrial agriculture used extensive amounts of nitrate fertilisers, which increased yields in the short term, but then led to a significant decline. As historian Thomas Fleischman has written about nitrate fertilisers in the GDR, the 'dramatic rise in [them] accompanied by a more rapid decline in their efficacy pointed toward an environment supersaturated with agrochemicals'.[103] At Bornuur, nitrate as well as other synthetic fertilisers were widely used, in conjunction with herbicides and pesticides, to increase grain

[94]Correspondence between Hans Reichelt and East German diplomat in Mongolia, Handwerker, 10 May 1976, DK 5/113, BArch.

[95]'Abkommen zwischen der Regierung der Deutschen Demokratischen Republik und der Regierung der Mongolischen Volksrepublik über die Gewährung eines Kredits zur technisch-ökonomischen Unterstützung bei der Entwicklung der Landwirtschaft der MVR', August 1971, 2, DK 4/2578, BArch.

[96]Rosemaria Myslowitsch and Dietmar Gräfe, 'Landwirte und Tierzüchter im Staatsgut "Ernst Thälmann" in Bornuur', in *Auf Goldsuche in der Mongolei: Chronik der Geologenexpedition der DDR in der MVR*, ed. Joachim Stübner, Aribert Kampe, and Reinhard Schirm (Projekt Piccolo, 2005), 200–4, 231.

[97]'Noch höhere Erträge aus mongolischer Erde: Erich Honecker und Shambyn Batmunch besuchten das Staatsgut "Ernst Thälmann" in Bornuur', *Neue Zeit*, 28 October 1986, 4.

[98]Eli Rubin, *Synthetic Socialism: Plastics and Democracy in the German Democratic Republic* (University of North Carolina Press, 2008), 87–8.

[99]'Bericht über die Entwicklung der Wasserwirtschaft der Mongolischen Volksrepublik', undated, 7, DK 5/624, BArch.

[100]'Stellungnahme zum Telegramm des Botschafters der DDR in der MVR, Gen. Handwerker, an den Stellvertreter des Vorsitzenden des Ministerras der DDr, Gen. Dr. Reichelt, vom 2.4.1976', 4–5, DK 5/128, BArch.

[101]'Environmental Performance Reviews: Mongolia', 354.

[102]Fleischman, *Communist Pigs*.

[103]Ibid., 86–7.

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production for both human consumption and animal feed.[104] High levels of nitrate and phosphorus in the water can lead to eutrophication of water, which threaten the viability of fish and other aquatic populations. Such problems were widespread in the GDR, and likely presenting a growing challenge in Mongolia. Certainly, post-communism, these issues have become well documented in Mongolia, too.[105]

As communism collapsed in the GDR and Mongolia in 1989, the fate of the mine at Boroo and the collective farm at Bornuur were uncertain. As the GDR became folded into the larger and wealthier Federal Republic of Germany (FRG), its development projects were reassessed in light of the FRG's priorities.[106] For mining at Boroo, the formerly East German state-owned enterprise Geological Research and Expedition (GFE) Halle was privatised and continued to operate in and around the mine for a number of years. As a 1990 report noted, though, 'The GDR specialists, as in other projects, had barely trained [Mongolian] counterparts; the majority of the activities including handwork was done by themselves', a situation which reduced the cost efficiency of the endeavours after 1990. And without the primary goal of gold deliveries to the (now no longer extant) GDR, the GFE's viability in an international marketplace was called into question. Interestingly, the GFE quickly and explicitly introduced language about environmental protection.[107] It eventually lost its bid to remain active amid Mongolia's opening to global markets in the 1990s.[108]

Bornuur had less economic potential in a globalised economy, and officials from the FRG viewed it more as a development project that should only be selectively supported. FRG officials acknowledged that the collective farm had only continued to function thanks to East German subvention.[109] As in many cases, East German expectations for return on the investment in development projects had not been met during the Cold War. Into the 1990s, the FRG supported veterinary work and agricultural production at Bornuur, including personnel and equipment. In 1992, agreements between the German and Mongolian governments viewed Bornuur as a development project without a self-interested stake. German development funds were to aid in Bornuur's transition from a former state-owned collective farm into four partially privatised companies, none of which the FRG viewed as economically viable in a competitive market.[110] By 1993, Germany had ended its support for Bornuur and its transition into the global economy, preferring instead to support Mongolian agriculture through different means.[111] With its own supply chains for food well established, the Federal Republic did not have the same motivations for investment that the GDR had formulated within the context of the Cold War before 1989.

East German projects in Mongolia presented a conflicting set of interests and resulted in unintended problems for the Mongolian economy and workers, the landscape, and, at times, East

[104]Seliger, 'Abschlußbericht aus dem Einsatz des Chefkonsultanten und Leiters des DDR-Spezialistenkollektivs im Staatsgut "Ernst Thälmann" Bornuur, MVR, vom Februar 1982 bis September 1985', September 26, 1985, 7–8, DK 1/28243, BArch.

[105]Fleischman, *Communist Pigs*, 111–12; 'Environmental Performance Reviews: Mongolia', 269–70, UN ECE.

[106]'Die Altprojekte der DDR sollen keine Ruinen werden', *Frankfurter Allgemeine*', 24 October 1990, B 213/55629, BArch, Koblenz. Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung, ed., *Auf Augenhöhe: 50 Jahre Bundesministerium für wirtschaftliche Zusammenarbiet und Entwicklung* (Nomos Verlagsgesellschaft, 2012), 130–1.

[107]'Abschlußbericht über die Dienstreise einer Arbeitsgruppe in die MVR vom 11.–22. September 1990', 12, B 213/55629, BArch, Koblenz.

[108]Botschaft Ulan Bator an das Auswärtige Amt, 'Boroo-Projekt', 3 November 1992, B 213/55635, BArch, Koblenz.

[109]'Bericht Sicherung der Nachhaltigkeit der landwirtschaftlichen Produktion im Somon Bornuur', 11–12.

[110]Correspondence between the German Ambassador to Ulaanbaatar, Reinhard Holubek, and the Mongolian Minister for Industry and Trade, Ts. Tsogt, 14 August 1992, B 213/55635, BArch, Koblenz; 'Sicherung der Nachhaltigkeit der landwirtschaftlichen Produktion im Somon Bornuur/MONGOLEI', November 1992, 3.

[111]Gesellschaft für Technische Zusamm enarbeit (GTZ) GmbH, 'Besprechungsbericht', Mongolei, Workshop Leipzig, 12 January 1993, B 213/55635, BArch, Koblenz.

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German experts. Gold mining at Boroo had the potential to bring in large sums of money for Mongolia and provide the GDR with a valuable metal. The collective farm at Bornuur initially appeared more altruistic—without clear and immediate profit for the GDR—but there, too, the goal was to benefit East Germans. Meat from the farm and other places in the Mongolia were intended to be processed at a plant in Ulaanbaatar and then shipped to the GDR for East German consumption.[112] Schemes such as that as well as mining at Boroo, for example, did become profitable, but East German agreements resulted in a huge outflow of wealth and resources from the country. Underneath East German agreements to help build socialism along Marxist-Leninist lines in Mongolia lay a more complicated, and at times exploitative, relationship, similar to Western development efforts in other parts of the world.[113] East Germans altered the landscape, introducing chemicals and machinery, and supported the MPRP's efforts to sedentarise the population. The Cold War hierarchies manifested themselves on lands and peoples in disparate places and with divergent effects.

Conclusion

In February 1990, democratic protestors in Ulaanbaatar held up signs that read 'Gold, Silver and Uranium must belong to the People!' and 'Stop the Communist Experiment!'[114] As communism unravelled in Mongolia—as it had in the GDR and across Eastern Europe in 1989—criticism of the system's failures was rampant. Extraction and exploitation had drained the country of natural resources, and East German development projects were key to that legacy. East German conceptions of nature and the economy-influenced projects were often ecologically unsound as well as dangerous to humans and animals, not unlike the East German communists' pursuit of economic growth within the GDR. Projects such as Boroo were designed to benefit the GDR through importing resources and goods that the East German leadership could not otherwise access or produce in sufficient supply. Even at Bornuur, the state collective farm, East German understandings of food, crops, and animal husbandry overrode Mongolian perspectives.

East German projects in Mongolia illuminate how communist ambitions fitted into a period of acceleratory extraction and consumption after the Second World War. They connected people and industries from thousands of miles away through communist ideas about nature, society, and modernisation, transforming environments, all in the name of solidarity. The GDR and its experts' endeavours were representative of development projects around the world. East Germany was an international actor in an era of rapid globalisation and consumption. Communist economies did not keep up with Western ones, but they certainly tried, often using similar patterns of exploitation. They removed wealth from resources from the Global South to Europe with devastating impacts on the environment. After communism's collapse in Eastern Europe and Mongolia, international investors stepped into the void—sometimes taking over the very same mines that the GDR and Soviet Union had operated—and began a new era of resource extraction.[115] The fraught East German–Mongolian friendship underscores continuities chronologically and spatially beyond the bounds of the Cold War, shaping global modes of mining and trade to this day and with continuing environmental impacts.

[112]'Niederschrift über die Konsultation', 14.

[113]Lorenzini, *Global Development*, 2–7; Vijay Prashad, *The Darker Nations: A People's History of the Third World* (New Press, 2008); Sarah Babb, *Behind the Development Banks: Washington Politics, World Poverty, and the Wealth of Nations* (University of Chicago Press, 2009), 1–2.

[114]Jaime A. Flor Cruz, 'Better Late than Never', *TIME*, 26 February 1990, 30–31, B 213/55630, BArch, Koblenz.

[115]This process accelerated after the 1997 passage of a new, more liberal Mineral Law. Dulam Bumochir, *The State, Popular Mobilisation and Gold Mining in Mongolia: Shaping 'Neoliberal' Policies* (UCL Press, 2020), 33.

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