

Greening the China–Mongolia–Russia economic corridor

Strategically located between Russia and China, Mongolia has a unique opportunity to strengthen trade linkages between Asia and Europe while expanding its reach to new markets. In 2016, the three countries reached a comprehensive deal on developing the China–Mongolia–Russia (CMR) economic corridor. At its core, the CMR corridor aims to improve transport connectivity and cross-border trade services through infrastructure development, and to strengthen cooperation across energy, agribusiness, communication technology, tourism and environmental protection.

The CMR corridor carries geopolitical and economic importance for Mongolia. Joining this grand scheme will likely bring Mongolia closer to the economic orbit of China, already its largest trading partner, accounting for 76 per cent of Mongolia's exports. For decades, Mongolia's infrastructure has suffered from considerable deficiencies due to underinvestment. Under the Belt and Road Initiative, China is expected to channel some US \$30 billion of credit to Mongolia for infrastructure projects (OECD 2019). The proposed corridor aligns well with Mongolia's national development strategy, known as the Steppe Road, which calls for massive infrastructure investment to expand the country's railway and road systems and to upgrade the electricity grid and energy supply pipelines. Chinese investment and technologies offer a promising alternative to meet Mongolia's acute infrastructure needs, but many have raised concerns about sustainability and the increasing risks of indebtedness.

Several aspirational rail and road routes are proposed to connect regions of Mongolia where major mining and industrial sites are being developed, including a rail line from the giant Tavan Tolgoi coal mine to the Chinese border intended to reduce traffic and the resulting environmental damage on unpaved roads. Mega-mining projects are set to gain economic viability due to close to China and the improved logistical conditions along the CMR economic corridor. Overdependence on mining, however, makes the economy of Mongolia structurally vulnerable to external market shocks and commodity price cycles, and comes with the high environmental risks associated with extractive industries.

The Government has made economic diversification a top policy goal and is keen to promote the export of non-mining products to the corridor countries and beyond. Among the identified BRI transport routes, the Mongolia central route boasts the shortest path between Asia and Europe, but it is currently underutilized and underdeveloped compared to other competing land trade routes. Custom and trade facilitation remains a key to the success of the Mongolia economic corridor. **To the**

southern end of Mongolia's central route, a major cross-border economic zone is under construction. Already, the border city of Erenhot – China's largest land port to Mongolia – has made progress in electronic custom procedures and witnessed a 500 per cent increase in transit volume of China–Europe freight trains between 2016 and 2018 (Mongolia Today 2019, Hou 2019). Since 2016, China, Mongolia and Russia have signed a number of tripartite agreements to streamline border clearance procedures and facilitate seamless road and railway transport along the corridor. Full implementation of WTO's Trade Facilitation Agreement, which Mongolia recently ratified, is expected to bring down the transaction costs by about 16.5 per cent and strengthen Mongolia's trade competitiveness (WB 2019b).

Mongolia's ailing energy infrastructure and insufficient grid coverage undermine the country's growth potential. The use of inefficient coal-burning stoves during long winters has led to a serious air pollution challenge in urban areas. Owing to its vast coal reserves, Mongolia generates 93 per cent of its power from coal. Meeting the growing energy demand while reducing reliance on coal for health and environmental benefits is among the top concerns of the Government of Mongolia, which has set the ambitious energy targets of achieving universal access to electricity and a minimum 30 per cent share of renewables in the energy mix by 2030. Promisingly enough, the country's rolling steppes and deserts are ideal for wind and solar, with an estimated potential of 2.6TW. With some 270 sunny days a year and nearly one-tenth of the territory rich in wind resources, Mongolia has the potential to become a regional clean energy exporter (Mongolia Today 2019). One aspirational project under consideration along the corridor is the creation of a regionally integrated power supply and transmission network, part of the ambitious Asia Super Grid, for exporting clean energy out of the Gobi Desert to China, Japan and other northeast Asia destinations. For this to happen, new investment and planning need to be aligned with long-term energy goals, but the OECD (2019) notes a worrying prospect that 95 per cent of the planned power capacity in Mongolia will still come from coal, leading to further carbon lockin. Recently China has announced its BRI overseas investment will not go for coal-fire power project. Moving forward, an integrated approach favoring the selection and deployment of renewable technologies will be key to greening the economic corridor.

The environmental tasks

Mongolia's landscape features unspoiled natural habitats. The country's vast areas of steppe grasslands and deserts are of critical ecological importance. The Daurian Steppe to the east is the most undisturbed steppe ecosystem in the world, supporting viable populations of large ungulates and birds, many of them considered nearly extinct in other regions of the world (UNECE 2018). The country's water resources are unevenly

distributed, with 70 per cent of river flows originating in the north and west. The dry and cold Gobi ecosystem is fragile, with rangelands easily degraded by overgrazing to deserts. Mongolia's endless steppes and rich natural resources have sustained a nomadic lifestyle for generations, profoundly shaping the country's cultural identity and heritage. In recent years, however, the growing number of livestock and increasing pressure from human activities – including mining and transportation – have disrupted the ecosystem beyond its carrying capacity.

Decades of economic growth has transformed Mongolia into a modern democracy, yet overdependence on mining and natural resources, coupled with rapid urbanization, has led to increased pressure on land, environmental degradation and an elevated level of air pollution. Melting glaciers, decreased precipitation and intensified extreme weather hazards has led to increased vulnerability in key economic sectors and people's livelihood.

Accelerated human activities such as mining continue to increase pressure on land and water resources. In winter, uncontrolled burning of coal has caused some of the worst pollution days in the world's coldest capital city. This has become a heightened concern for the country's sustainable development. In response, the Government has introduced a ban on the use of raw coal and put forward bold policy goals to guide sustainable urban development, green facilities planning and waste management in urban settlements.

The Government of Mongolia is determined to address these challenges through a nationwide green development agenda. In doing so, the country aims to shift away from a resource-intensive growth model into one that is climate-resilient and efficient, while preserving its unique environment and coping with climate change. To meet the substantial needs for infrastructure investments, the Government has given high priority to the use of public-private partnerships to improve the delivery of public infrastructure and services. A number of green public-private projects in renewable energy and municipal infrastructure have been developed and supported by multilateral development loans and private investment

In this context, the proposed infrastructure development in the CMR corridor, given its long-term sustainability impacts, could be a make-or-break force to the country's green development trajectory. If not planned carefully, the massive scale of BRI infrastructure may pose irreversible environmental risks to Mongolia's fragile

ecosystems and threaten the socially vulnerable. Energy and mining projects, notably coal-fired power plants, could lock Mongolia into carbon for decades to come, undermine its national GHG emission targets, incase its air pollution crisis and exhaust groundwater supplies. On the other hand, the deployment of renewable energy technologies and grid, of which China is a world leader, can provide green investment opportunities for Mongolia's energy transition.

Large-scale transportation infrastructure, given its vast geographic coverage, tends to generate a wide range of direct and indirect environmental impacts – air and sound pollution from traffic; landslides and flooding; and the loss or fragmentation of habitats and biodiversity. One particular concern for the CMR economic corridor compared to other routes is that new routes that cut through intact frontier landscapes, mostly in Russia, will lead to uncontrolled deforestation and loss of biodiversity and other ecosystem services (Losos et al. 2019).

While risks of ecosystem fragmentation can be reduced through better planning, as is the case for Mongolia's central transit route where the corridor follows pre-existing transport routes, more efforts are needed to improve the management and enforcement of state and local protected areas. In high-risk mining sites and production areas, the lack of secured funding and legal enforcement may jeopardize the efforts for proper mine closure and environmental rehabilitation. Although Mongolia produces a third of the global supply of cashmere from its sizable goat stock and could potentially grow more with improved logistics along the CMR corridor, rapid and uncontrolled expansion might increase pressure beyond the carrying capacity of pastureland and accelerate desertification in certain regions (OECD 2019).

Lake Baikal, a UNESCO World Heritage site, contains about 20 per cent of the world's fresh surface water, and is home to more than 3,000 species of plants and animals, many of which are unique to that ecosystem. In recent years, hydropower development planned in the Selenge basin, largely driven by growing energy demand for mining activities, has raised concerns over biodiversity impacts on the habitats of endangered migratory freshwater species of the Selenga–Lake Baikal complex (UNESCO 2018). New hydropower projects that fully consider the transboundary environmental impacts and nature-based solutions such as upstream riverbank erosion management are likely to have better environmental outcomes.

The corridor to a green economy

Green development is at the core of Mongolia's long-term development strategy. In 2016, the State Great Hural (national parliament) of Mongolia endorsed a visionary policy framework, the Mongolia Sustainable Development Vision 2030, which sets out aspirational goals to transform the country into a thriving economy by 2030, while

ending all forms of poverty, reducing social inequality, improving environmental sustainability and strengthening the governance system. To embark on a transition to a green economy, Mongolia became the first country to join the UN PAGE - Partnership for Action on Green Economy in 2013 and started mainstreaming green economy policies into its national development strategy. Recognizing the centrality and potential of sustainable infrastructure, Mongolia submitted a draft Resolution on Sustainable Infrastructure (UNEP/EA.4/L.6) at the Fourth United Nations Environmental Assembly (UNEA), which was then adopted by the international community, calling for governments and relevant stakeholders to apply appropriate sustainability criteria to all infrastructure, and to promote the mobilization and realignment of investments towards sustainable infrastructure projects

Greening the CMR economic corridor can be a catalytic force for Mongolia's green transition, but implementing strong sustainability criteria and safeguards for infrastructure projects will require improved institutional capacity and coordination across the relevant agencies in BRI countries, as well as from China (WB 2019a).

The Multilateral Environmental Agreements (MEAs) on climate, biodiversity and environmental governance can be viable instruments to influence and enhance the environmental and social performance of BRI infrastructure projects. The Convention on Migratory Species, which Mongolia and many Central Asia countries have ratified, for example, has the potential to promote transboundary conservation efforts within the BRI economic corridors. Mongolia has also expressed the interest in acceding to the Aarhus Convention on access to information and environmental justice, which can promote a greater environmental transparency and public participation in decision-making of BRI infrastructure projects. A recent study found that the use of strategic environmental assessments to determine long-term, regional and multisectoral effects of large infrastructure projects is not common in the Belt and Road development agenda. When it comes to development financing, the Multilateral development banks (MDBs) have developed strong environmental and social safeguards for infrastructure lending based on decades of experience and best practices. The World Bank's Environmental and Social Framework and the IFC Performance Standards are broadly used as international benchmarks for good practices. The Asian Development Bank and the European Bank for Reconstruction and Development are already active in Mongolia investing in low-carbon and sustainable infrastructure projects.

The Chinese BRI financiers now have a real opportunity to collaborate with MDBs to promote sustainable lending practices and enforce more stringent environmental and social safeguards in infrastructure projects. In 2019, 30 financial institutions, including major BRI lenders, have come together the first time to adopt the Green Investment Principles for the Belt and Road. Furthermore, a set of industry-led voluntary standards and rating systems for sustainable infrastructure provides a useful framework for investors and project developers to integrate sustainable approaches and best practices

throughout the project phases. In the context of BRI, Chinese industry associations have incorporated concepts from leading sustainability standards to develop the guidelines for sustainable infrastructure. Those guidelines consider relevant international rules such as the Extractive Industries Transparency Initiative, the International Council on Mining and Metals' good practice environmental, social and governance requirements, and OECD guidelines.

Mongolia has demonstrated initial success in containing the virus at an early stage. Mongolia needs to build a resilient economy that invests in sustainable infrastructure and creates green jobs. Greening the China-Mongolia-Russia economic corridor is an opportunity not to miss.