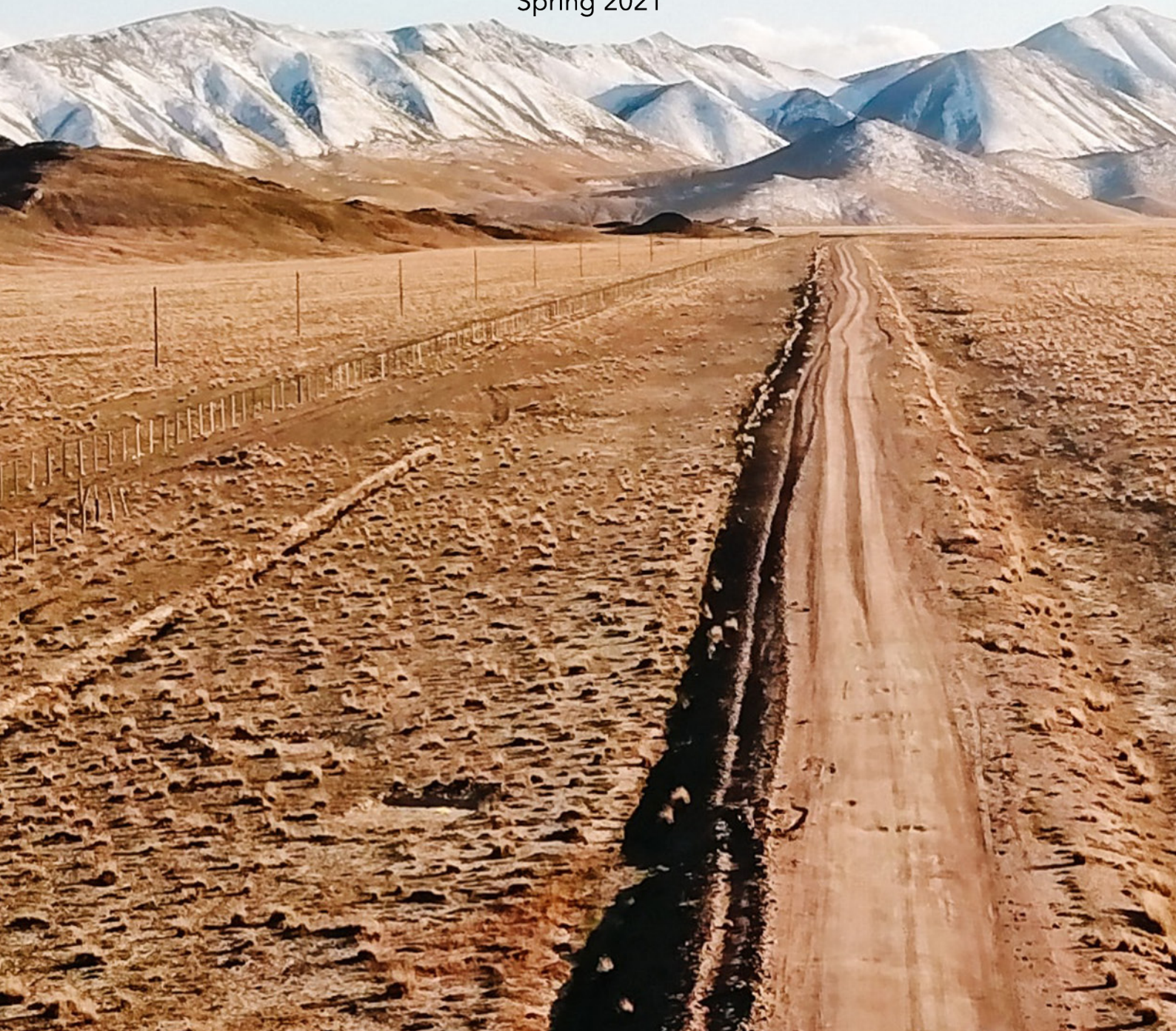


THE CENTRAL ASIA WAY

The road ahead for environmental and social sustainability in the BRI

Oxford University Silk Road Society | The Green BRI Center
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OXFORD UNIVERSITY
SILK ROAD
SOCIETY



中央财经大学绿色金融国际研究院
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FOREWORD

Central Asia is an important region for China’s investments in its Belt and Road Initiative (BRI). The region’s rich history, its abundance in natural resources and biodiversity, its political idiosyncrasies and its diversity of cultures make it a unique place to do business.

Central Asia is also a region that is in need for much investments in energy, transport infrastructure as well as in other economic sectors to support development. Yet, providing investments that support not only economic growth and rent-seeking, but that supports sustainable development in the region is challenging. How, in a region that is not only vast and hard to govern, but that encompasses many rare and valuable natural resources can sustainable development be achieved? How can development protect nature and climate, improve livelihoods of people, while providing some economic returns for investors. It is indeed a challenge, however, a challenge that – if done right - provides many opportunities for investors, people and nature.

To shine light on some of the most important challenges and provide solutions to utilize opportunities to drive sustainable development in Central Asia and make true of the promise to build a lean and green Belt and Road Initiative, this report provides relevant insights

for investors and developers, including those coming from China. In their research, the author team touch upon biodiversity and wildlife trade, climate and energy, corruption and technology, and society and soft power. Rather than only looking at the challenges, the authors provide applicable solutions derived from technical analyses and from comparable case studies.

As a research center based in Beijing supporting relevant stakeholders in China and internationally to accelerate greening investments in the BRI, it was a great pleasure to support the Oxford Silk Road Society and their dedicated team in researching and compiling this report. It is encouraging and promising to see how ecological and social sustainability has become an elementary part of the study of development – no matter where you are in the world. It is clear: sustainable development can only succeed if we work together across boundaries – whether it is for transboundary issues in Central Asia, or transcontinental issues and research between the UK and China.

With that, I hope that the readers of this report will be many and that you, as the reader, will enjoy the report and be inspired to support sustainable development for a world that we want to live in, now and in the future.

Dr. Christoph NEDOPIL WANG
Director
IIGF Green BRI Center

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Introduction

Being part of the Oxford University Silk Road Society's collaboration with the Green BRI Center has been an immensely rewarding experience, and it has been amazing to see this Central Asia-focused project grow into a fully fledged report.

Central Asia was historically a cornerstone of the Silk Road, and thus naturally also the launchpad for the BRI, dating back to the geopolitical project's original 2013 launch in Kazakhstan. Given the region's importance, it is also then natural that OUSRS expands upon its existing work in focusing on the BRI's impact here.

From biodiversity and debt for nature swaps to blockchain anti-corruption and the wildlife trade, this report maps out the intersection of BRI with Central Asia's development path, and argues that an opportunity is open to explore innovative responses to the challenges of green governance.

As this report shows, it is vital for stakeholders to capitalise on these opportunities in environmental and social sustainability proactively, rather than retroactively. It is our

hope that the research here can help contribute to existing literature, and impact stakeholder's and policymaker's perspectives for the better, as they consider the impact of the BRI on their own communities and environments.

Much of the current work on the BRI has been dominated by regional specialists - something that, as students of Persian and Chinese, has inspired much of our own work. But the BRI is nothing if not diverse, and it deserves diversity in how we approach it too. In this spirit, we took advantage of all Oxford has to offer and recruited our analysts from across as broad a range of disciplines and subjects as possible.

Many thanks to all of our analysts for their hard work, creativity, and most of all for the exceptional quality that they have produced. Their abilities and efforts are demonstrated in the calibre of this paper, and we hope to have done their work justice.

We hope that you enjoy reading this report as much as we've enjoyed putting it together, and that it can be part of the vital ongoing conversation about how the BRI can be positively harnessed for communities around the world.

Matthew MacGeoch and Ruby Osman
Co-Presidents
Oxford University Silk Road Society

The Central Asian Way: The road ahead for environmental and social sustainability in the BRI

Clare Blackwell

Central Asia is in need of development, energy, and infrastructure, and the BRI can offer these. However, as a region facing transboundary disputes, food and water security problems, and corruption, regulations and incentives must be put in place to ensure the BRI also accounts for the long-term health of people and environment.

Context

Central Asia is a region characterized by deep histories of global trade, long-standing geopolitical tensions, and increasing modern development. Most often defined as the five post-Soviet states of Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan and Kyrgyzstan, the region is particularly vulnerable to the influences of shifting political powers and a changing climate.

Perhaps the most important factor pertinent to setting the stage for a study of the BRI in Central Asia is that the states span differing degrees of autocracy.¹ The political vacuum left after the end of the Soviet Union led to struggles for power both within and between the states, as each has aimed to carve out their space in the region and in the world order.² In 2018, Transparency International ranked all five countries in the 30th percentile or lower in their Corruption Perceptions Index³, and intra-regional mistrust is



common. The combination of border disputes, divisive mismanagement of resources, and intra-state mistrust lead to a lack of coordinated response to the BRI and has often left the region scrambling to balance sovereignty against the influences of its more powerful neighbors.⁴ Cooperation and coordination will be essential for the region's responses to environmental stressors and foreign investment.

Repeating History

A second factor to consider is the region's more recent history of environmental mismanagement. In 1953, Nikita Khrushchev launched his "virgin lands" policy in an effort to make Central Asia an agricultural breadbasket⁵, and the implications of these 1960s policies persist⁶. Since the fall of the Soviet Union, transboundary sharing of water resources has been marred by conflict, rivalry, and mistrust.⁷ The inability to properly share resources and the intensity of Soviet infrastructural systems led to the now-infamous collapse of the Aral Sea⁸ and increased water security problems across the region. Despite more recent developments in the creation of an Interstate Commission for Water Coordination

in Central Asia and the Regional Environmental Centre for Central Asia (CAREC), tensions persist between downstream users—Kazakhstan, Uzbekistan and Turkmenistan—and upstream states—Kyrgyzstan and Tajikistan—fighting to develop their agriculture and hydropower industries.^{9 10}

Central Asia now faces a new set of environmental challenges in addition to this ongoing water security. A hotspot of global climate change, Central Asian states are experiencing rapidly melting glaciers, increasing desertification, and a host of threats to biodiversity.¹¹ Several case studies in this report move beyond discussion of water resources to bring to light further pressures placed on energy, biodiversity, and governance in Central Asia. With past failures to mitigate environmental harm in mind, they ask what must be done to ensure greater cooperation and conservation into the future.

BRI: Risk or Opportunity?

Enter China's Belt and Road Initiative. As Chinese industry invests ever more heavily in Central Asia, questions are being raised about whether the

"Cooperation and coordination will be essential for the region's responses to environmental stressors and foreign investment."

BRI will bring further environmental damage^{12 13} and social instability,^{14 15 16} or whether it will live up to its promises to be both 'green'¹⁷ and a 'win-win cooperation'.¹⁸

A key hub of the original Silk Road, Central Asia has been an important part of the BRI from the beginning. Since President Xi Jinping announced the initiative in Astana, Kazakhstan in late 2013, Chinese investment in extractive industries and transportation has grown dramatically, and China now accounts for almost 25% of Central Asian trade—surpassing Russia as the region's main trading partner.¹⁹ While central governments and elites in the region are generally enthusiastic about the benefits of the BRI, local peoples often object to its social and environmental impacts.²⁰ These tensions have important repercussions for Chinese investments and social stability throughout Central Asia.

As with governance structures, significant variation exists between different states' relationships with China and the BRI. As of 2019, there were 261 total projects in Central Asia that could be deemed part of the BRI, but these are not evenly distributed; Kazakhstan had 102 while Turkmenistan had only 26.²¹ Projects are also unevenly distributed across industry, with the majority focused on trade and industrial development.²² While each case study in this report looks carefully at a specific country to understand certain political, social, and environmental contexts, synthesis shines through in the consistent recommendations for coordination and strengthened governance systems across the region. The murky, bilateral nature of BRI agreements combined with the history of tension between states in the region can lead to fragmented oversight, and the cases in this report speak to the importance of both local and regional responses.

Overview

The studies in this report span a range of environmental and social concerns, connected by their emphasis on transparency, cooperation, and mitigation of risk. In the first case study, Irvin discusses diversification of renewable energy in Kazakhstan, identifying potential avenues for increased wind and solar investment. In the second, Ots addresses biodiversity in Kyrgyzstan and the need for stronger conservation capacity to protect against potential environmental damage by the BRI. This is followed by a specific analysis on the illegal wildlife trade in Tajikistan by Bragger, and the potential to prevent increased trafficking with training regimes adapted from Afghanistan.

Finally, the last two projects examine risks facing the BRI from a governance perspective. Kneen looks broadly at corruption in the region and how using cryptocurrency and smart contracts could prevent the BRI from increasing already troubling trends. Meanwhile, Blackwell examines protest and civil disobedience and the risks such pushback poses to BRI investments. The report then concludes with analysis of the recommendations presented, drawing together the various perspectives to provide guidelines for a BRI that lives up to its environmental, social, and development promises.

Energizing Kazakhstan: Renewable Energy Opportunities

Julia Irvin

Kazakhstan's energy grid has not been modernised since its independence from the Soviet Union and is falling into a state of dereliction and disrepair. With its sights set on 50 percent renewable energy by 2050 and substantial solar and wind energy capabilities, Kazakhstan could be a model for green energy development. Funding from the BRI offers a unique opportunity to rebuild Kazakhstan's energy grid using renewable energy.

Background

Kazakhstan's current energy grid was developed during the Soviet Union and is heavily reliant on its interior coal, gas, and oil resources.¹ Following independence, economic crises prevented the country from investing in the maintenance and development of the grid.² Today, this dereliction manifests as low efficiency with the average 1000MW coal plant having only a 27% net efficiency.³ At the same time, the funding available domestically for improving the grid has been limited further by national electricity subsidies. These subsidies are protected by the threat of provoking political unrest, a common response to electricity pricing increases across Asia.⁴ Since ratifying the Kyoto protocol, Kazakhstan has also set ambitious goals for shifting the country's electric power generation to renewable resources. Kazakhstan intends for renewable energy to constitute 30 percent of electricity generation by 2030 and 50 percent by 2050.⁵ Below I will make the case that there is significant opportunity for BRI investment to build up solar and wind energy. The most effective

means of implementing these goals would be for future solar projects to focus on implementing parabolic trough high-temperature solar thermal collectors (in which curved, reflective 'troughs' concentrate radiation from the sun on a pipe containing a heat transfer fluid, which then creates high-pressure superheated steam which can generate electricity) in Kazakhstan's energy-deficient southern region and wind projects to focus on developing wind farms in Djungar in the east.⁶ These recommendations ensure the most effective use of funding with regard to energy output and energy infrastructure development, while keeping in mind Chinese regional interests.

The Case Against Hydropower

Among renewable energy resources, hydropower is frequently raised as a source of energy for Central Asian countries. However the region's over-reliance on this technology has become self-defeating and alternative sources are needed. Since the collapse of the Soviet Union, the Amu Darya and Syr Darya rivers have become geopolitical flashpoints in the region as the five Central Asian countries have attempted to maximise the rivers' hydroelectric and irrigation potential.⁷ A lack of environmental planning and international coordination in these efforts has not only created political setbacks, but it has decimated the Aral Sea, into which the two aforementioned rivers flow.⁸ While Kazakhstan does have limited hydroelectric capabilities, these factors point to the conclusion that large-scale development of Kazakhstan's power grid would be best implemented in other renewable energy sectors. As a solution to these limitations, this proposal advocates for future BRI investment to be directed toward developing Kazakhstan's solar and wind energy infrastructure capabilities, these factors point to the conclusion that large-

"Since ratifying the Kyoto protocol, Kazakhstan has also set ambitious goals for shifting the country's electric power generation to renewable resources."



Power Generation Zones in Kazakhstan

Note: I (Western Zone): 1 - West Kazakhstan Region; 2 - Atyrau Region; 3 - Aktope Region; 4 - Mangystau Region; II (Northern Zone): 5 - Kostanay Region; 6 - North Kazakhstan Region; 7 - Akmola Region; 8 - Pavlodar Region; 9 - Karagandy Region; 10 - East Kazakhstan Region; III (Southern Zone): 11 - Kyzylorda Region; 12 - South Kazakhstan Region; 13 - Zhambyl Region; 14 - Almaty Region.

Source (map and legend): Jianzhong Xu, Albina Assenova, and Vasilii Erokhin, "Renewable Energy and Sustainable Development in a Resource-Abundant Country: Challenges of Wind Power Generation in Kazakhstan," *Sustainability* 10, no. 9 (September 17, 2018): pp. 1-21, <https://doi.org/10.3390/su10093315>, p.6.

scale development of Kazakhstan's power grid would be best implemented in other renewable energy sectors.⁹ As a solution to these limitations, this proposal advocates for future BRI investment to be directed toward developing Kazakhstan's solar and wind energy infrastructure.

Solar Power

As for solar energy, the southern part of the country, including the Kyzylorda and South Kazakhstan Regions, proves to have the highest levels of insolation.¹⁰ Developing solar energy in this area could be especially beneficial, as its energy demands currently exceed that which it is able to supply locally, meaning it is often necessary for the region to source energy from the north of the country.¹¹ Concentrated solar thermal collectors are the most advantageous for this region as, in comparison to solar photovoltaic panels, they are more efficient, their materials can be sourced locally within Kazakhstan, and their basic functioning does not rely on the use of water to the extent that solar

photovoltaic panels do.¹²

In 2016, construction began in the Akmola Region on a 100MW solar power plant, funded by KB Enterprises and Siemens. Similar plans have been announced by KB Enterprises and Siemens to build additional plants in Almaty, South Kazakhstan, Kyzylorda, and Karaganda.¹³ The Hevel group also financed a project in the Akmola Region in 2019 for a 100MW photovoltaic solar farm.¹⁴ Additionally, in 2019 the Asian Development Bank agreed to provide funding for another 100MW solar farm in the southeastern Jambyl Region.¹⁵ The Eni Group, in line with the aforementioned guidance, announced it will provide funding for a 50MW photovoltaic plant in the southern region of Turkestan earlier this month.¹⁶

Wind Power

According to Karatayev and Clarke, Kazakhstan has a maximum capacity of 760 GW of wind energy that can be generated cost-effectively in



the Atyrau Region and in a belt to the west of Nur-Sultan stretching across the Kostanay, Akmola, and Karagandy Regions¹⁷. In the former region, wind power is the strongest, especially in Fort Shevchenko, and may be competitively priced in comparison to gas-fired energy dominant in the region. In the latter, while the strength of the wind is weaker, the power generated may still be produced at a lower cost than the region's established coal-burning industry.¹⁸ However, it is also worth noting that there are opportunities for wind energy development outside of these two areas as well. Xu et al. note that one of the most promising areas for wind energy development is Djungar, along the border with Xinjiang.¹⁹ Not only does this area boast strong and frequent wind, but the implementation of wind energy technology in this region is predicted to generate the greatest reduction of greenhouse gas emissions in all of Kazakhstan²⁰.

There are already some projects for developing Kazakhstan's wind energy infrastructure. The Zheruyik Wind Power Plant, financed by the European Bank for Reconstruction and Development (EBRD), is expected to generate

50MW of wind power in the Almaty region with the objective of providing energy for southern Kazakhstan where it would otherwise have to be sourced from fossil fuel plants in the northern part of the country.²¹ The Zhanatas Wind Power Plant, financed by the Asian Infrastructure Investment Bank, Industrial and Commercial Bank of China, the Green Climate Fund, and the EBRD, is also planned for the southern region of Zhambul hopes to generate another 100MW to help alleviate this issue.²² In contrast, the Eni Group and General Electric have provided funding for the construction of the Badamsha 1 48MW capacity wind farm in the Aktobe Region.²³ The EBRD and Clean Technology Fund Trust Fund Committee have also provided funding for the Yereymentau 50MW Wind Farm in the northern Akmola region.²⁴ As for western Kazakhstan, South Wind Power LLP and Horgos Jiuhe SilkBridge New Energy Co are financing a 42MW wind farm in Mangistau near the critical area of Fort Shevchenko.²⁵ Progress in the development of wind energy in Kazakhstan has been encouraging but should not be limited to the above projects. Future BRI investment in Kazakh wind energy may be best directed

toward the region of Djungar, which has not only been shown to be an especially viable area for wind energy development, but may interest Chinese firms particularly due to its proximity to the border with Xinjiang.

Lessons Learned from Iran

Like Kazakhstan, Iran has similarly struggled with the transition from dependence on its own fossil fuel reserves to renewable energy. Where Iran has started this transition, efforts to convert existing energy infrastructure to renewables have largely been consumed by a focus on hydropower. However, in Iran, the development of hydropower has been hampered by extensive droughts. This has made the development of wind and solar energy all the more attractive.²⁶

While Iran has the greatest capacity for wind energy, it hopes to invest more into its solar energy development in the long term.²⁷ Research into Iran's solar capacity has illuminated important issues for Kazakhstan to consider as it continues to develop its own solar industry. Importantly, Kalehsar notes that air pollution has the capability to interfere with solar panel performance.²⁸ It seems as though the bulk of Iran's solar energy is generated through photovoltaic panels which negatively impact the country's ability to apply this technology. Because photovoltaic panels' functioning is diminished under high temperatures, this leaves only five northern provinces fit for solar energy production in Iran.²⁹ In contrast, the energy generating technology within parabolic trough high-temperature solar thermal collectors functions at temperatures between 260 degrees Celsius and 400 degrees Celsius.³⁰ Collectors of this type are used in plants such as the Solana Generating Station in Gila Bend, Arizona, USA where temperatures reach highs of over 42 celsius, which is above the average summer high temperatures in one of Kazakhstan's southernmost cities: Shymkent.³¹

Looking Forward

Overall, the development of Kazakhstan's renewable energy grid is encouraging, but could benefit greatly from further BRI funding. Only three of the aforementioned solar and wind

"Research into Iran's solar capacity has illuminated important issues for Kazakhstan to consider as it continues to develop its own solar industry."

energy projects have benefitted from Chinese funding: the Jambyl solar plant, the Zhanatas wind farm, and the Mangistau wind farm.

The recommendations for future BRI funding in this sector are as follows:

- Recognising Kazakhstan's central role in the BRI, Chinese firms should aim to be more competitive with their European counterparts in funding development of Kazakh solar and wind energy infrastructure.
- Development of solar energy infrastructure should be focussed in the south with the goal of making the region self-sufficient. Future projects should implement parabolic trough high-temperature solar thermal collectors, which are better suited to local conditions and their constituent materials can be sourced within Kazakhstan.
- The next stage of wind power infrastructure development should focus on Djungar, one of the most promising regions for wind energy generation in Kazakhstan and a location which holds significance for Chinese regional interests.

Ready for some action? The conservation capacity of Kyrgyzstan and China

Minna Ots

The Belt and Road Initiative will inevitably affect the environment, including biodiversity. Worryingly, the BRI finance suffers from a lack of best-practice safeguards for biodiversity protection—a critical shortfall when partnering with low-income biodiverse developing countries such as Kyrgyzstan in Central Asia.

Introduction

Whilst the BRI is led by Chinese industry,¹ the private sector is cautious in its implementation of environmental protection, especially regarding biodiversity conservation.² Chinese BRI financiers lack international best-practice safeguards, whilst the whole project may impact more than 369 000 km² of vulnerable habitat in a 25 km buffer zone around planned BRI infrastructure.³ Moreover, invasive species introductions along the BRI routes are an additional threat to biodiversity.⁴ Kyrgyzstan is particularly vulnerable, since most of the country is a biodiversity hotspot; there are some protections in place but limited knowledge about the significance of the wildlife outside protected areas exists.⁵ The top-down green financial system of the Chinese government is yet to fully engage the private sector,⁶ so it will be up to the Kyrgyz Republic to ensure best practice by holding companies accountable. Considering the high levels of community activism in Kyrgyzstan, this could be a reality. However, considering Kyrgyzstan's still ongoing ecological governance development, it will require support from international experts in the field, e.g., from international NGOs.

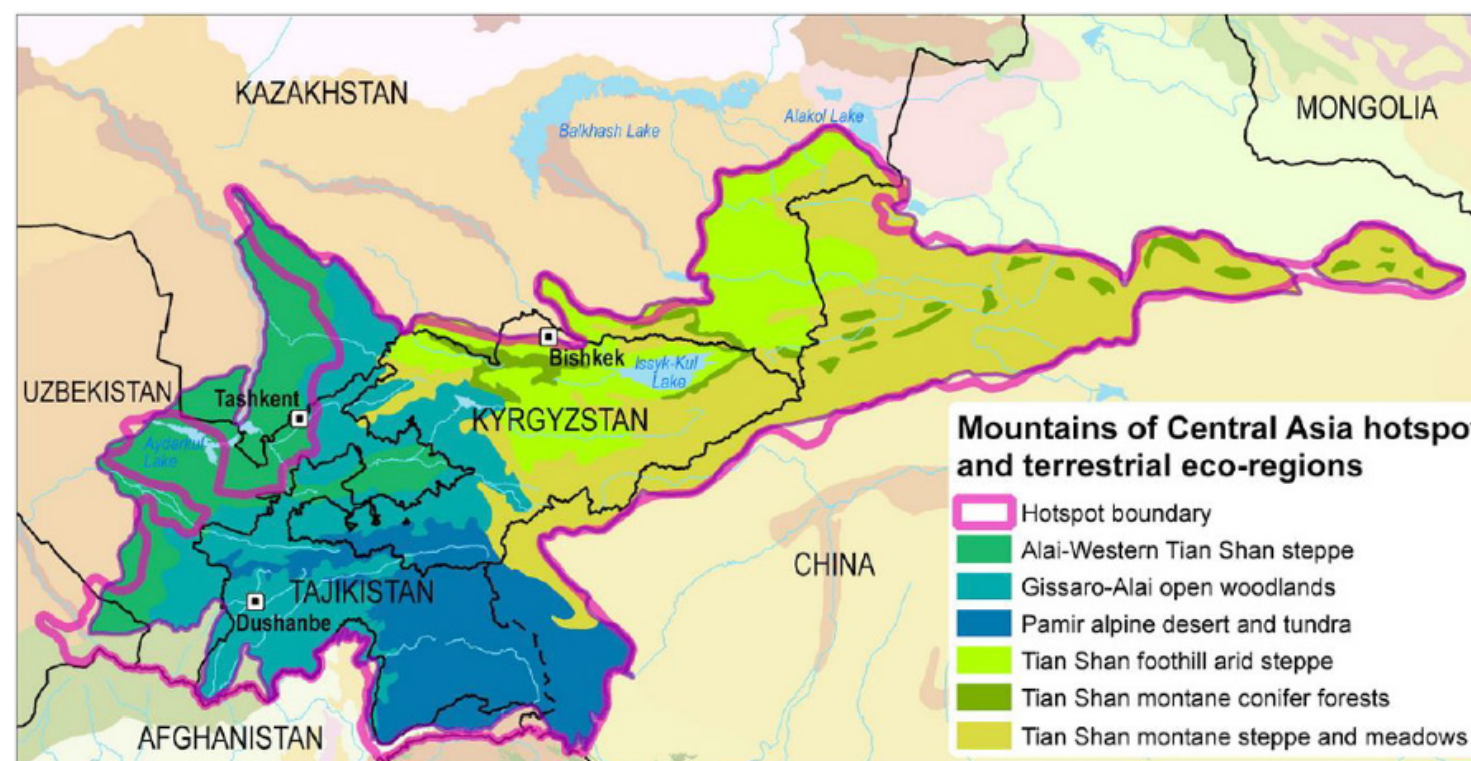


Figure 1. The location and area of the Mountains of Central Asia hotspot with the extents of the six terrestrial eco-regions spanning the hotspot, five of which are present in Kyrgyzstan. (Adapted from The Critical Ecosystem Partnership Fund, "Ecosystem Profile: Mountains of Central Asia Biodiversity Hotspot," 2017.)

Kyrgyzstan: Biodiverse and at Risk

Kyrgyzstan is a mountainous, landlocked country in Central Asia. It has an average altitude of 2750 meters with 40% of the country over 3000 meters and 90% over 1500 meters. The country hosts 88 major mountain ranges, most significantly the Tian Shan, the Celestial Mountains in the North, and the Pamir Mountains in the South. Almost all of Kyrgyzstan is included in the 'Mountains of Central Asia' biodiversity hotspot^{7*} (Figure 1), and the area is part of WWF's Global ecoregions.⁸

The hotspot contains many species of import, both from the perspective of conservation and agriculture. It is home to many ancestors/wild type varieties of domestic fruits, nuts, and crops— the preservation of which should be of great value and import to global agricultural communities.⁹ The hotspot also contains a total of 68 globally threatened species, 19 of which are critically endangered according to the IUCN Red List.¹⁰

Considering the unique and threatened status of the country's ecosystems, great consideration is needed to not degrade it further. As China

"However, considering Kyrgyzstan's still ongoing ecological governance development, it will require support from international experts in the field, e.g., from international NGOs."

in practice.¹² Moreover, the governmental institutions with more power display little care for protecting the environment and biodiversity.¹³ For example, the previous Prime Minister, Mukhammedkalyi Abylgaziev has been charged with corruption due to signing a government decree allowing the Kumtor Gold Company CJSC to double their mining area in the vulnerable Issyk-Kul biosphere zone, despite existing bans on mining expansions in the region.¹⁴

Finance

Only around 0.5% of public expenditure in Kyrgyzstan is directed towards the environment, including biodiversity and climate change adaptation.¹⁵ The contribution of international donors is equally minor, and the role of private sector is marginal (discounting China's potential investment through BRI).¹⁶ The Biodiversity Finance Initiative of the United Nations Development Programme has estimated that Kyrgyzstan's biodiversity finance needs are around 30 million USD until 2023; currently, only 40% of the target has been achieved. The remaining 60% could be met by donations, public funds, and private sector contributions¹⁷, a potential impactful avenue for BRI project investors. The country has set course towards creating an 'inclusive green economy' and has implemented it into its long-term 2040 vision.¹⁸

Research, Training, and Education

Kyrgyzstan, despite its relatively small, sparse population, has 64 universities, yet none feature in the QS World University Rankings. For comparison, Kazakhstan with 125 universities,¹⁹ with 13 featured in the QS World Rankings and one in the Top 200.²⁰ Kyrgyzstan's educational quality can be poor with problems such as academic corruption,²¹ and many youths suffer

expands its Belt and Road Initiative in Kyrgyzstan, both countries need policies to ensure not just a 'green' but a 'biodiverse' BRI in vulnerable mountainous regions. This case study will, first, investigate the biodiversity conservation progress and capacity of Kyrgyzstan. Second, it will describe the potential Chinese biodiversity protection capacity along the BRI. Finally, it will recommend areas for key focus, and highlight actions for greening BRI in Kyrgyzstan.

Biodiversity Conservation Capacity of Kyrgyzstan Governance, Institutions, and Policy

Since the collapse of the Soviet Union, Kyrgyzstan's environmental and ecological governance has gone through three major reforms, each increasingly emphasizing a market economy coupled by decentralization, although with complications due to poorly planned and executed system changes.¹¹ Despite a well-rounded normative and legal environmental framework and membership of multiple international environmental conventions and protocols such as CITES and the CBD, the implementation of some laws is lacking

from an educational and skills mismatch.²² As few of these 64 universities train conservation specialists, international organizations are highly important for providing further training both nationally and abroad.²³ Further education and training in ecological and environmental protection at all stages of life is needed to further the conservation agenda.²⁴

Management, Protection, and Use of Biological Resources

The Mountains of Central Asia hotspot includes 32 confirmed global Key Biodiversity Areas (covering 20,610 km²) and Kyrgyzstan has two Important Bird Areas both inside and outside the hotspot boundary²⁵ (Figure 2). The percentage of protected areas has reached more than 7% of the total area of the country,²⁶ although often finance and enforcement are lacking, making some protected areas by 'name only'.²⁷ Unfortunately, data outside of these protected areas is lacking and even though relatively good data for the areas themselves exists, limited capacity exists to fully utilise these data for conservation.²⁸ Notably, Kyrgyzstan has no protocol in place for managing invasive species.²⁹

Public Awareness and Action

Kyrgyzstan hosts a diverse mix of active civil society organisations, with over 200 focussing on conservation of different taxa.³⁰ However, ecological information is not easily accessible by the public and further transparency and inclusiveness is required³¹ to increase the impact of participation by civil society.³²

Key Points:

- Environmental and ecological governance are still developing, and more financing is needed.
- National conservation research capacity is dependent on international support, but civil society is very active.
- Biodiversity protections are in place but overall data limitations prevail.

China and Biodiversity

At the United Nations Summit on Biodiversity in 2020, President Xi Jinping declared China to be heading towards an 'ecological civilization' which 'promotes harmonious coexistence of man and Nature'.³³ The growing importance of biodiversity reflects well from investments: since 2017, the annual governmental biodiversity related finance is more than 260 billion yuan (~40 billion USD).³⁴ In November 2019, the Ministry of Ecology and Environment of China, the Ministry

of Finance of China, and the World Bank agreed on the need to promote adding biodiversity into the decision-making chains of the private sector and to mainstream its inclusion.³⁵ However, uptake on biodiversity conservation is very low, exemplified by about 90% of environmental protection companies still being centred on pollution and waste management.³⁶ Moreover, Chinese conservation research capacity is lagging behind its Western counterparts', raising doubt on the future success of its biodiversity governance.³⁷

BRI: a Bumpy Road for Biodiversity

Narain et al. (2020)³⁸ found that only a quarter of the identified BRI financiers had biodiversity impact mitigation requirements in place, of which just one organisation was Chinese, despite 90% of BRI finance originating from China. Interestingly, Chinese scientists lead on BRI research, although mere 2.8% (either in Chinese or English) is on environmental topics and majority of papers focus on Chinese routes with only 7% of Chinese papers investigating a route outside of China. The whole project has been estimated to impact more than 369 000 km² of vulnerable habitat in a 25 km buffer zone around planned BRI infrastructure,³⁹ with likely species invasions,⁴⁰ and potential increases in forest conversion and illegal hunting and wildlife trade.⁴¹ In 2013, China established the Chinese Academy of Sciences Research Centre for Ecology and Environment of Central Asia in Xinjiang as part of BRI, with regional offices in all but Turkmenistan.^{42 43} Thus, some efforts for a 'Green BRI' have been made, but current policy is non-binding with no repercussions for breaches.⁴⁴

Recommendations

• Research and Education Capacity

BRI scholarships for conservation research could help build capacity both in China and in BRI partner countries.⁴⁵ Equally, with China's biodiversity conservation capacity lagging behind its Western counterparts',⁴⁶ China and Kyrgyzstan should partner with existing NGOs with conservation expertise to expand their capacity to monitor biodiversity and build

effective governance mechanisms.⁴⁷

• Finance

China could do well by spreading its aspiration of an 'ecological civilization' through the BRI, potentially with boosting local biodiversity protection budgets. Kyrgyzstan receives a fair share of investment from Western donors, but it is still only a marginal amount⁴⁸ and it could do well with additional finance to not just reach a set budget but accelerate the development of community approved conservation action.

• Debt-for-Nature

Considering China is Kyrgyzstan's biggest bilateral creditor since 2012 and provides over a third of external debt, the Kyrgyz Republic risks reaching a state of insolvency.⁴⁹ Since low-income countries in general are struggling to pay back loans from Chinese banks,⁵⁰ the BRI payback schemes should consider 'debt-for-nature' (DFN)—reducing the debt in exchange for nature protection—which could both add extra value to loans, and position China as a world leader in biodiversity conservation funding.⁵¹ Cancelled or reduced debt coupled with the chance to use local currency for debt payback into conservation projects eases the overall payback burden of a debtor country.⁵² Moreover, involving a third party, either an international or local NGO, as a broker could ensure transparent and decentralized allocation of funds.⁵³

• Protected Areas

China has the power and opportunity to initiate not just transboundary infrastructure but also well-needed transboundary conservation,^{54 55} especially since the Mountains of Central Asia hotspot reaches into North-West of China. Well-planned networks of protected areas coupled with wildlife corridors crossing the BRI infrastructure at vital connectivity points would ensure long-term sustainability of the projects.⁵⁶



Figure 2. The expanse of Key Biodiversity Areas (green), Important Bird and Biodiversity Areas (pink), and Protected Areas (dark green boundary) in Kyrgyzstan. (Adapted from The Critical Ecosystem Partnership Fund, "Ecosystem Profile: Mountains of Central Asia Biodiversity Hotspot," 2017.)

Belt and Road Kill? Preventing illegal trade in snow leopards

Jody Bragger

*The BRI offers the Central Asian range states of *Panthera Uncia* a once in a generation chance to bring economic opportunity to a region often overlooked in development. Like all projects of this scale, the ramifications for the area's biodiversity, and in particular its flagship species *Panthera Uncia* remains hard to determine. However, previous foreign interventions such as the War in Afghanistan offer us a roadmap for development that benefits both the snow leopard as well as the region's people.*

Introduction

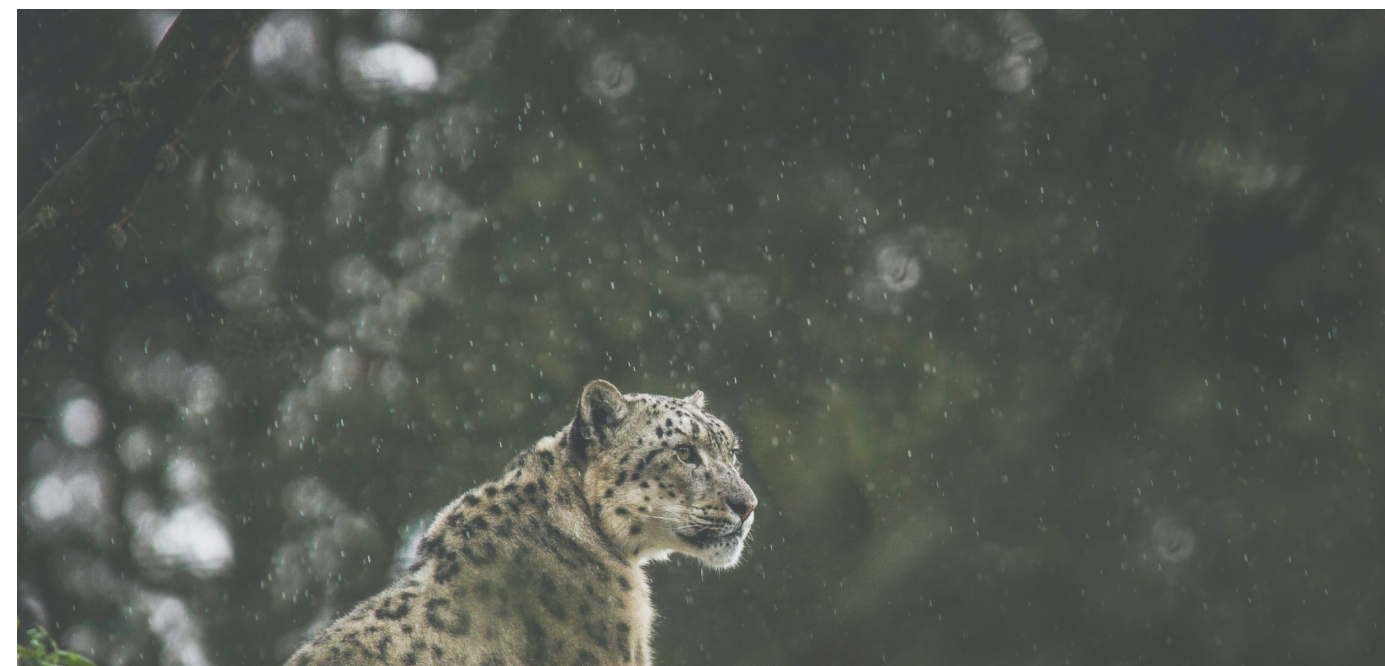
The range of the enigmatic snow leopard (*Panthera Uncia*) covers a vast 1.6 million sq. km of high-altitude ecosystems across twelve states involved in the Belt and Road Initiative.¹ Culturally, the species is considered a 'flagship' for many states in its range and plays an important role in the natural identity of Central Asian nations.² Often called the 'Keeper of the Watershed' due to its cascading effect on the various trophic levels maintaining a healthy ecosystem,³ the species has been under considerable pressure for the value of its pelts in fashion, taxidermy and ornamental objects for the majority of the 20th Century.⁴ Since Tajikistan joined the Convention on International Trade in Endangered Species (CITES) in 2016, all range states in the BRI are now party to Appendix I of the convention, which bans all trade in snow leopard parts. However, trade is increasing, with

"With only 6000-8000 snow leopards left in the wild and the species listed as vulnerable by the IUCN Red List, the effect of the BRI within its range states is of great interest."

a 61% rise in traded pelts over a ten-year period and evidence that its appeal has widened to traditional Chinese medicine and even edible meat.⁵ With only 6000-8000 snow leopards left in the wild and the species listed as vulnerable by the IUCN Red List, the effect of the BRI within its range states is of great interest.

The War in Afghanistan

China's policy of 'going out' or internationalising its industries has seen large numbers of Chinese workers relocated to countries hosting BRI projects,⁶ and whilst there has been scant research on the long-term effects of these infrastructure projects in the range of *Panthera Uncia*, it is perhaps in the anticipated increase in foreign workers and their pay packets that we can draw parallels. The War in Afghanistan that began in 2001 can act as case study for what might be anticipated when large numbers of overseas workers enter this range. Some of the aforementioned increase in trade in *Panthera Uncia* has been linked to the war in Afghanistan and the deployment of NATO soldiers and private contractors.⁷ Initially, Wildlife Conservation Society (WCS) staff stationed in Afghanistan noticed, through anecdotal encounters, a healthy and vibrant market of snow leopard products in the multiple bases administered by NATO across Afghanistan. WCS then conducted interviews with 400 soldiers returning to Fort Drum in the US through a partnership with the US Department of Defence. The results found that 40% of soldiers had purchased or had seen a colleague purchase wildlife product whilst stationed in Afghanistan. With troop rotations reaching 80,000 per year at the peak of the conflict, this is not an insignificant number.⁸ The issue was not just that soldiers were purchasing snow leopard products, but that they had also created a market for the illegal wildlife trade



that would not have previously existed. The international staff and their salaries suddenly introduced significant purchasing power into an impoverished country rocked by conflict and with penetrable, uncontrolled borders. Furthermore, the opportunistic sellers who previously had no buyers for snow leopard products and thus no reason to partake in the illegal trade suddenly began to have a consistent and well-paid customer base.⁹

Supply or Demand?

The BRI by its very design facilitates freer movement of goods, people and ideas and with that the opportunity for trade in snow leopard parts, and there are suggestions that the area could begin to rival the markets of South East Asia as a new hub for the illegal wildlife trade.¹⁰ The relationship between supply and demand in the illegal wildlife trade is a complex one and the two are often symbiotic. In addition, evidence from trade in other big felines indicates that a supply driven market can convert to a demand one quickly with the associated criminal practices around it.¹¹ For countries within Central Asia expecting a boom in foreign workers and tourists due to the BRI, similar challenges may arise.¹² Whilst Western soldiers are not a traditional market for snow leopard products, there is evidence that the pelt

and by-products of *Panthera Uncia* already have a demand market in China and thus an influx of Chinese workers and investors could place *Panthera Uncia* under considerable pressure.¹³

Solutions

Once again, the war in Afghanistan offers us case studies on how to navigate the effects of BRI in Snow Leopard range states.

Small Changes, Big Outcomes

Firstly, demand intervention should be targeted at all workers deploying to the country through 'pre-deployment' training aimed at explaining both the impact of the illegal wildlife trade and the large fines involved if caught under Appendix I of CITES. This training can be extended to border staff in range states to empower them to intervene and increase convictions at both the international border as well as among street sellers.¹⁴ The successful 2016 WCS programme can act as a case study for this. By working across departments and local actors, the NGO tailored training to raise awareness regarding laws prohibiting wildlife trade as well as the real impact that the trade had on the country the soldiers were supposed to be helping. The result was impressive, with no wildlife furs found on subsequent surveys in the traditional marketplaces.¹⁵ The training of border staff also

allows collaboration between different national teams and can help create informal and formal asset protection and policy networks as the BRI increases collaboration and brings nations closer together.¹⁶ As the driver of the BRI, Chinese state entities have an opportunity to implement these relatively low-cost schemes as part of BRI projects to demonstrate leadership in their new role of custodians of environmental change within the region.

People are the prize

Secondly, as the BRI brings investment, infrastructure and the associated increase in people the opportunity for human-wildlife conflict and retaliation toward *Panthera Uncia* potentially increases. There is evidence that this conflict can increase informal markets for snow leopard products and thus facilitate more targeted poaching.¹⁷ To counter this, a system of financial incentives to mitigate poaching should be adopted. These can be as simple as a payment scheme for farmers in snow leopard range for livestock lost to hunting.¹⁸ There are examples of community administered schemes within Afghanistan that can serve as best practice for adoption and these schemes can have the multiplier effect of not only reducing snow leopard deaths but also building a consensus of support for the BRI initiative amongst the rural and remote communities that are adjacent to the projects.¹⁹

Eco-Tourism to the rescue?

Finally, the BRI and its potential increase in both labourers with leisure time and tourists should be used as an opportunity to diversify income. In spite of the War in Afghanistan, the country was still able to develop a relatively healthy tourism industry in the newly gazetted Wakhan National Park. Tourist numbers there have increased year by year, allowing local people to generate conservation-based income for preserving the dramatic cultural and natural landscapes they call home.²⁰ The additional presence of snow leopards in these natural areas can act as extra allure; by conserving cultural attractions and snow leopards to generate sustainable forms of income, it is hoped that the community will be

"As the driver of the BRI, Chinese state entities have an opportunity to implement these relatively low-cost schemes as part of BRI projects to demonstrate leadership in their new role of custodians of environmental change within the region."

incentivised to protect snow leopards into the future. Given the already burgeoning tourism trade in countries like Kyrgyzstan and Tajikistan²¹ there is scope to target BRI workers as a quick and reliable tourism market especially if more focus is placed on sustainable protected areas with the associated infrastructure.

Discussion and Recommendations

Previous investment and movement of people in the region during the War in Afghanistan saw a rise in the illegal trade in *Panthera Uncia* pelts. BRI could constitute a potential catalyst for a general increase for illegal trade due to the potential increase in migrant labour who already have a demand for the snow leopard products.

To counter this, national governments and BRI investors should incorporate three schemes as part of the BRI investment:

- Demand suppression through training of migrant labour and those policing borders.
- Financial incentives to limit human-wildlife conflict.
- Sustainable tourism development.

The snow leopard is an asset for its range states and the short-term needs of BRI projects should be countered with the long-term responsibility to protecting this ecologically and culturally significant species.

Where do all roads lead? Corruption and the BRI in Central Asia

Finbar Kneen

Corruption is rife in Central Asia, and questionable business practices within Chinese investment have further exacerbated this problem, damaging both the effectiveness and the prestige of the Belt and Road Initiative. Large-scale infrastructure projects provide the clearest example of the negative impact of corruption, while modern technologies such as cryptocurrencies and smart-contracting offer hope that the scale of corruption can be decreased in the future.

The BRI has the potential to facilitate substantial positive development across Central Asia, including Pakistan and Afghanistan. However, corruption can and is acting to reduce the scale, effectiveness, and sustainability of investments, producing tangible and negative economic impacts, whilst infrastructure projects are affected as corners are cut and shortcuts are taken. The issue of corruption is further made clear when the countries that receive BRI investment are considered. In the TRACE Bribery Risk Matrix, most BRI recipient countries rank in the lower 50 per cent; Tajikistan, a case study within this article, is ranked as 174 out of 194 in its ability to resist corruption.¹

Aside from the obvious impact of corruption decreasing the efficiency and impact of investment, corruption also poses a threat to the diplomatic and soft power aims of the BRI. A series of scandals and complaints arising

from BRI investment: in Pakistan, for example, extensive corruption in projects related to the China-Pakistan Economic Corridor (CPEC) has embarrassed China, leading to a reduction in the size, scale, and goals of the BRI.² Initially, the BRI failed to recognise the possibility of corruption in impacting the program. When the BRI's guiding principles were published in March 2015, anti-corruption principles were not mentioned. Only since June 2017, when Xi Jinping attempted to encourage international cooperation in anti-corruption measures, has serious action been taken against the threat posed by corruption.³

A Bumpy road: Corruption in Tajikistan, Kyrgyzstan, and Kazakhstan

Tajikistan provides an excellent example of how lofty BRI initiatives can be derailed through corruption and graft. 90% of Tajikistan's surface area is covered by mountains, meaning roads are the primary method of transportation. Mountain passes are often entirely unpassable in the winter, where they are prone to avalanches. The 380km Dushanbe-Chanak highway, which sourced 80% of its financing from Chinese sources, cut driving times from Dushanbe to the Uzbekistan border from 12 hours to 4 hours, a seemingly remarkable achievement. However, the construction of the highway remains plagued by corruption. The CRBC (China Road and Bridge Corporation) was exempted from over a dozen different taxes for unclear reasons, and mere weeks after the highway was officially opened, it became a toll road operated by a company registered in the British Virgin Islands. If this was not enough, corrupt traffic police now utilise the highway to harass travellers and extract bribes.⁴

Similarly, Kyrgyzstan's largest infrastructure project was a 433km road linking the capital

"Aside from the obvious impact of corruption decreasing the efficiency and impact of investment, corruption also poses a threat to the diplomatic and soft power aims of the BRI."

Bishkek in the north to Kyrgyzstan's main southern city, Osh. This highway was also riddled with corruption - cement for the project was purchased at the price of 1.1 USD per KG, in comparison to the local market price of 0.07 USD. This was not an isolated incident. In 2016, the Kyrgyz prime minister and his entire cabinet were forced to resign over allegations that the tender of a \$100 million road construction contract was rigged to favour Long Hai, a Chinese company without a license that had been substantially underbid.⁵ Moreover, corruption is not just limited to the construction of roads; the modernisation of the Bishkek Heat and Power Plant saw clear evidence of overcharging, including a notable purchase of \$600 pliers.⁶

Almambet Shykamamtov, leader of the Kyrgyzstan opposition, has stated that due to the history of corruption within infrastructure projects, the notion that new contracts and projects will be free of corruption is a "fairy-tale"⁷. This sentiment is, generally speaking, built into investment analysis in Central Asia, which treats corruption as an inevitable deadweight loss, averaging 30% in Central Asia, but rising to 80% in certain countries such as Pakistan.⁸ Corruption can serve as funding for despotic governments, and red-tape can be specifically designed to be prohibitive, so that bribes are necessary for any reasonable project, no matter how well-intentioned, to progress.⁹ Particularly in Kazakhstan, flashy new Chinese infrastructure projects have both financed the government through corruption and made the government more popular, according to a study from George Washington University, "Chinese aid, loans, and partnerships with Kazakh oil companies enhance the Kazakh leadership's ability to stay in power".¹⁰ This naturally complicates anti-corruption efforts, which could directly be opposed by respective national governments that may benefit from corruption.

The above case studies, when combined with the experience of the NDN (Northern Distribution Network), however, show how the BRI scheme has the potential to increase the scale of corruption.

"This sentiment is, generally speaking, built into investment analysis in Central Asia, which treats corruption as an inevitable deadweight loss, averaging 30% in Central Asia, but rising to 80% in certain countries such as Pakistan"

The NDN, a western scheme, began in 2009 and invested in Central Asia to open new supply routes into Afghanistan, aiming to provide the NATO forces in Afghanistan with necessary non-lethal materials. By February 2012, 85% of the coalition's fuel supplies were transported through these northern routes. Despite a lack of concrete numerical data, anecdotal evidence suggests that corruption increased along the NDN in Tajikistan, the appetite for bribes increased so that drivers were stopped ten times per trip as opposed to three as traffic increased.¹¹ The NDN, therefore, serves as a warning that, unless safeguards are put in place, large scale foreign investment schemes such as the BRI can serve as a "corruption bonanza,"¹² and these fears are being realised in the present day as Chinese companies are routinely accused of enabling government corruption in Central Asia.¹³

The Road to Recovery - Off the Beaten Track

In response to the clear issues presented by the prevalence of corruption, the question that arises is what measures can be taken to reduce these issues in Central Asia, and how effective these approaches may be. Western investment is usually tied to certain conditions, such as a commitment to human rights or to certain democratic principles aimed at reducing the impact of corruption.¹⁴ While the effectiveness of these policies is debatable, the Chinese principle of non-intervention in the domestic affairs of other countries makes these conditions impossible, forcing us to turn to other methods to achieve the so-called "Clean BRI" that Xi Jinping has called for.¹⁵

Despite cryptocurrencies' association with money laundering and illicit eCommerce,

they can also serve as one potential method of reducing corruption, particularly through blockchain technology. Blockchain technology can essentially act as a "digital ledger,"¹⁶ storing a record of every transaction in a way that is simply impossible to do with physical cash. This ledger, which is almost impossible to manipulate,¹⁷ allows for a greater degree of transparency and pattern comprehension that become vital for corruption prevention or deterrence. This digital ledger could be expanded so that it contains identifying information; therefore, every dollar spent could be tracked and the users of these dollars could be identified, making corruption effectively impossible with sufficient oversight.¹⁸ Outside of anti-corruption measures, Cryptocurrencies have other benefits such as instantaneous transactions and "borderless transfer-of-ownership", which could stand to reduce transaction time and cost.¹⁹

The use of blockchain in cryptocurrencies can be expanded through the use of smart contracting, which was recently defined by the Chancellor of the High Court, Sir Geoffrey Vos as:

A set of promises, specified in digital form, including protocols within which the parties perform on these promises (from the writings of Nick Szabo);

A recording of a legal agreement between parties that is written in a language that is both human-intelligible and machine-readable, whose text incorporates an algorithm which automates some or all of the performance of the agreement (Dr Jason Allen, Sir Geoffrey's former judicial assistant).²⁰

The use of these smart contracts can ensure that certain set requirements can be met and that funds can only be released when certain conditions are met. In effect, smart contracting allows for a greater degree of automated oversight, which naturally allows for the extent and impact of corruption to be severely reduced.²¹

These solutions are however imperfect.

"Blockchain technology can essentially act as a "digital ledger," storing a record of every transaction in a way that is simply impossible to do with physical cash."

Cryptocurrencies are notoriously volatile, meaning payments are naturally complicated. Moreover, cryptocurrencies and smart contracting require a degree of digital infrastructure that may not always be available within rural areas of Central Asia; a worker without access to the internet will not accept payment in the form of cryptocurrency. Nevertheless, if suitable intermediaries can be used who accept the risk of holding cryptocurrencies, then they could serve as a valuable tool to counteract corruption. The number of intermediaries across the developing world is steadily increasing, with start-ups such as BitPesa in Kenya converting between Bitcoin and the local currency.²²

Final Recommendations

The overall positive impact of BRI investment could stand to be significantly reduced through corruption that can be endemic in Central Asia and China. This can be clearly illustrated through the examples analysed within this article. The BRI has undoubtedly been impacted by corruption in the past, and corruption will continue to represent a problem for the BRI in the future. Nevertheless, the impact of corruption can, and should, be limited through policies that encourage the use and implementation of:

- Cryptocurrencies, particularly those with blockchain technology, as they allow for a greater degree of transparency and openness within payments and funding.
- Smart contracting, which when used in tandem with cryptocurrencies, enables automated oversight to play a stronger role in regulating the progress of projects, discouraging corruption.

How Protest is Posing a Growing Threat to the BRI

Clare Blackwell

Discontent and activism against BRI initiatives pose financial risks and spell potential public image problems for China and host countries.

Understanding the social and economic motivations of communities who protest and how to prevent future mobilisations is essential to the success of the BRI in Central Asia.

A quintessential example of the risks of opposition to BRI investments and the complexity of resolving this opposition is the case of the Lamu Coal Fired Power Plant in Kenya. After three years of campaigning by local communities, Kenya's National Environmental Tribunal ruled against a license for the power plant in 2019, and two billion US dollars of investment by into the project was lost.¹

While this might be one of the most notable examples of massive financial loss for the BRI from civil disobedience, there are examples of similar discontent across Central Asia. The Oxus Society's Central Asia Protest Tracker lists 63 discrete protest events in the region from January 1, 2018 to August 31, 2020 alone where China was a key issue.² Studies have estimated that shutdowns from protest can cost mining projects up to US\$20 million per week, and even more than that in opportunity costs and cost diversions.³ Without resolving underlying tensions, protest and discontent will continue to put financial and political strain on BRI projects for both host countries and China. Factors such as suspicion about the advance of Chinese influence in post-Soviet countries, transboundary community linkages, particularly in Kazakhstan, tensions between state and local interests, and

the potential health and environmental risks of industry developments all play significant roles in societal pushback to BRI projects.

Rising Chinese Influence

The legacy of Soviet authoritarianism persists in Central Asia, where governance is often driven by clientelist networks, and the drive towards democratization is driven primarily by more local grassroots mobilizations for civil liberties.⁴ Given the economic and environmental fallout from some of the Soviet Union's past infrastructural and agricultural policies, including the shrinkage of the Aral Sea⁵ and the Kazakh famine of 1932-33⁶, many communities are resistant to the idea of strong foreign influence in the region. China has emerged in place of the now-defunct Soviet Union as a key player in Central Asian economic, political and security affairs, surpassing Russia as the region's main trading partner and now accounting for almost 25% of Central Asian trade.⁷ However, their combined system of state-funded capitalism and one-party authoritarianism is often perceived by communities to be at odds with the values and needs of Central Asian citizens.⁸

Several examples demonstrate the pushback to Chinese influence. In February 2020, in Bashi, Kyrgyzstan, hundreds of protestors gathered, many on horseback, against the growing presence of China in the region, demanding the planned construction of a \$275-million logistics centre be cancelled. In a strikingly similar case, 1,000 people gathered in Atyra, Kazakhstan, in April of 2016, responding to a law enabling foreigners to rent agricultural land for up to 25 years. According to BBC News, "at the Aktobe rally, one protester said: 'After 25 years, they

"Studies have estimated that shutdowns from protest can cost mining projects up to US\$20 million per week, and even more than that in opportunity costs and cost diversions."

will stay for 65.'"⁹ Fear of long-term influence by China runs deep in many of these protests. In addition, these protests appear to have had their desired effect, as the Kazakh government implemented a five-year moratorium on the amendments to the land code as of August 2016,¹⁰ thus giving credence to the perception that protest can result in responses from central government.

Community Tensions

Key to understanding many of the examples of protest across Central Asia is recognizing the tensions between the needs of local communities and the desires of national governments. Lack of employment at the local level and destruction of local livelihoods, particularly herding and artisanal mining, are frequent complaints for local communities.¹¹ Increased large-scale mining, the importing of Chinese workers, and infrastructure that disrupts, physically and economically, traditional pastoral practices have been flashpoints for local discontent, particularly in Kyrgyzstan.¹²

Equally important to consider are transboundary communities. Xinjiang province, which borders Kazakhstan, Kyrgyzstan, and Tajikistan is home to

"Increased large-scale mining, the importing of Chinese workers, and infrastructure that disrupts, physically and economically, traditional pastoral practices have been flashpoints for local discontent, particularly in Kyrgyzstan"

1.2 million ethnically Kazakh people and a further 210,000 Kyrgyz, Tajik, and Uzbek peoples.¹³ In addition, the Uighur diasporic population in Central Asia is between 300,000 and 500,000.¹⁴ The source of a significant amount of pushback to BRI projects and increasing Sinophobia in Central Asia can be attributed not only to discontent with local policies and investment but to pushback against domestic policies within China.¹⁵ Addressing the anxieties of both transboundary and local communities will be key for Chinese investors and national governments to avoid costly, high-profile opposition.

Health and safety protocols

In 2019, a protest occurred over accusations of poisoned local water supplies caused by a Full



Gold Mining LLC, a Chinese mining company in Naryn province, Kyrgyzstan. The protests led to a clash with the workers of the mining company, highlighting ever-increasing tensions over health and safety in BRI projects. This was not a new concern; in fact, there have been multiple controversies over the years over environmental harm and employee rights between local communities and Gold Mining LLC alone.¹⁶ In fact, out of the 780 protests in Central Asia over the past three years, 214 had “environment”, “extractive industries”, “land”, or “welfare” as the key motivating factors.¹⁷ Mining is crucial to the Kyrgyz economy; it accounts for 29.2 percent of the country’s GDP and gold is the country’s primary export commodity.¹⁸ Thus, addressing health and safety concerns is paramount for avoiding costly shutdowns of infrastructure projects in the future.

Such a litany of issues stemming from one industry suggests an absence of an effective mechanism by which to regulate and police working practices, forcing a combative response from residents and protestors. These responses impact both the ability of BRI projects to make a return on investment as well as the ability of China to maintain positive public opinion regionally and internationally. As China ushers in an era of ‘ecological civilisation’¹⁹, reports of health, safety, and environmental concerns from BRI projects will serve to undermine their positioning as a global leader on environmentalism.

Recommendations

The success of BRI projects in Central Asia and beyond requires cooperation between China, host countries, and local communities. Without this third aspect, investments carry significant financial risk and long-term stability of BRI agreements is threatened. Studies consistently find that the cost of conflict is greater than the costs of mitigating disagreements before they occur,^{20 21 22} not only because of the loss of revenue but due to the costs of negotiation, legal action, and enforcement that it would take to respond to a potential incident. BRI investors and Central Asian governments should consider the following recommendations to prevent financial losses from future protests:

- Prior to investing in Central Asia, BRI investors should take note of the historical tensions and cultural and political contexts within which they work. Understanding underlying fears and engaging on a local level will prevent Chinese companies from accidentally stirring tensions and risking protest or discontent.
- To avoid future financial risk from protest, project partners should engage local stakeholders through sharing of project plans prior to implementation. Coordination not only between national governments but between investors and regional and local authorities would improve trust and transparency before potential tensions arise.
- Environmental and Social Impact Assessments (ESIA) are a key tool in evaluating risk to ecosystems and health and will identify potential root causes for protests to arise. While China has often emphasized its unwillingness to intervene in local regulations or laws,²³ failing to complete ESIA for future projects increases risk of civil disobedience. If Chinese investment companies do not require ESIA for a project, host countries should do so to protect their investments and prevent future risk from backlash.

Conclusion

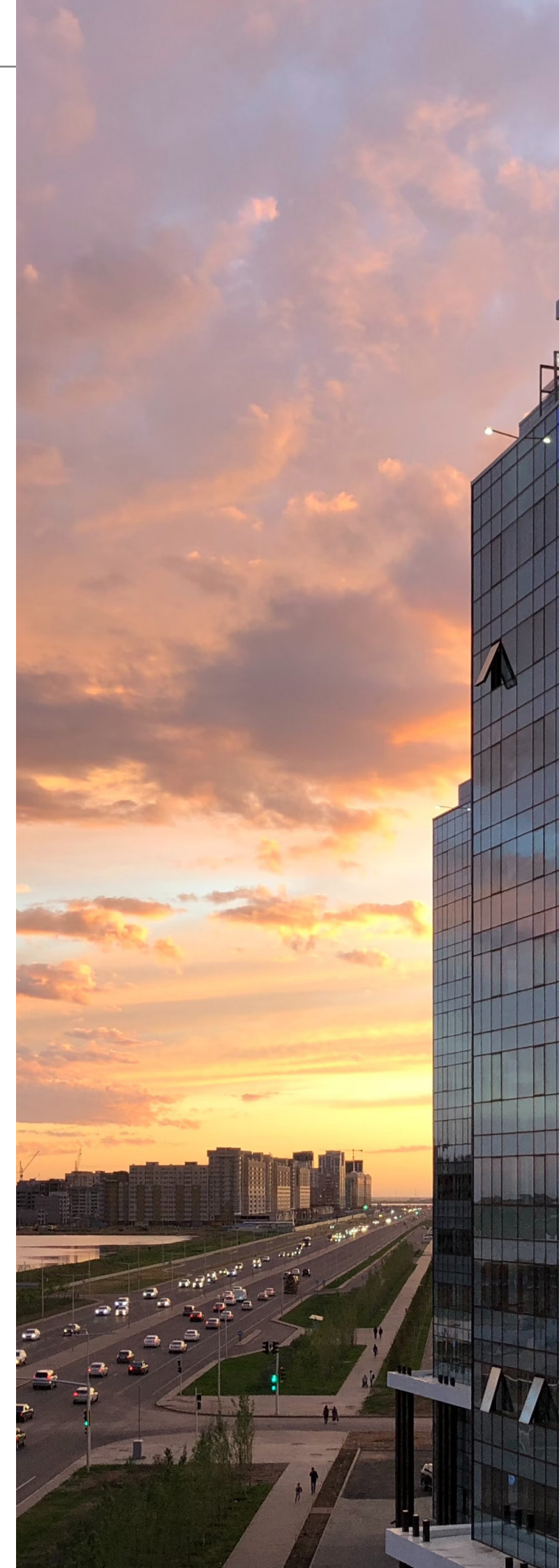
Clare Blackwell

A Post-COVID BRI

COVID-19 has shaped politics, environmental discourse, and economic realities worldwide, and Central Asia is no exception. On the one hand, concerns have been raised about the potential for COVID-19 to increase autocracy in the region.¹ On the other, as states look for solutions to counteract the current economic downturn, many governments are finding expansion of the BRI appealing.² As these case studies show, however, a hasty expansion of the BRI in coming years could have consequences for host countries and for China. Regional governance structures and investors in the BRI should take care to evaluate the social and environmental risks associated with their projects and act with the long-term future in mind. Investments in training, technology, improved governance, and targeted financing initiatives will both reduce costs and ensure that claims of a green and equitable BRI are not empty promises.

Moving Forward

The recommendations in this case study span governments, private industry, and NGOs. From biodiversity conservation to preventing corruption, Central Asia’s weaknesses in governance and oversight can be turned into its greatest strengths in conjunction with BRI investments.



Training

- Increase education initiatives in conservation through partnerships between Kyrgyzstan, China, and conservation-focused NGOs to ensure long-term capacity to protect biodiversity
- Training of migrant labour and border police to suppress illegal wildlife trading
- Ensure investors in Central Asia are well-studied on social and political histories of the region and the specific regions of investment

Technology

- Develop solar and wind energy infrastructure that is suited to hot and dry local conditions, focusing on regions with high capacity for energy generation that does not rely on increasingly unpredictable hydrology
- Use cryptocurrency and smart contracting in transactions between China and Central Asian states to mitigate the risk of corruption

Governance

- Expand Protected Areas in Kyrgyzstan to prevent harm from the BRI from impacting the most biodiverse areas of the country
- Initiate transboundary conservation initiatives not just between Central Asian states but across the Chinese border as well
- Conduct Environmental and Social Impact Assessments to identify potential environmental, health and safety risks before they become controversies or sources of discontent
- Engage with local communities and local leadership with transparency from the beginning of projects to avoid future fallout or opposition

Financing

- Encourage eco-tourism to regions such as Tajikistan to provide financial incentive for communities to protect wildlife
- Initiate payment schemes to incentivise protection, not poaching, of snow leopards
- Invest in wind and solar power in Kazakhstan to be more competitive with Western investors, recognizing the importance of these renewable sources in the long-term
- Invest in biodiversity conservation, particularly through Debt-for-Nature schemes, which will alleviate some stress on debt-ridden Central Asian countries while positioning China as a leader in conservation financing

Endnotes

The Central Asian Way: The road ahead for environmental and social sustainability in the BRI
Clare Blackwell

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Energizing Kazakhstan: Renewable Energy Opportunities
Julia Irvin

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Ready for some action? The conservation capacity of Kyrgyzstan and China

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Belt and Road Kill? Preventing illegal trade in snow leopards

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Where do all roads lead? Corruption and the BRI in Central Asia

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How Protest is Posing a Growing Threat to the BRI

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Conclusion

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