Kazakhstan's Environmental Governance Conundrum

The Challenge of Clean Energy Transition for Extractivist States in Central Asia

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Fig. 1: Sunset in the mountain gorge Issyk (Photo courtesy of Islam Mirsaitov, 2021).

At the UN Climate Ambition Summit in December 2020, President Kassym-Jomart Tokayev made a bold announcement in the office of the Nursultan: Kazakhstan will be carbon neutral by 2060. To implement this plan, the government prepared a strategy document involving major reforms across all sectors of the economy.[1] This includes the areas of energy, manufacturing, agriculture and forestry, transport, housing, utilities, and waste management. During the COP26 summit held in Glasgow, Kazakh Prime Minister Asghar Mamin likewise noted that Kazakhstan was one of the first countries in the world to ratify the Paris Agreement (6 December 2016). Kazakhstan plans to reduce its greenhouse gas emissions by 15% by 2030 by adjusting the relevant energy share and adopting a new environmental law. Yet, despite the ambition to achieve carbon neutrality, the country faces multiple challenges. For one, Kazakhstan relies on natural resource revenues for its national income, with 27.6% of its GDP coming from the mining and energy industries. Thus, decarbonization requires a coordinated response to align its environmental regime with its broader economic development model.

Kazakhstan's commitment despite challenges

Kazakhstan has made commitments under the Paris Agreement and, in 2013, announced its intention to transition to a green economy by 2050. However, the feasibility of these national strategies is questionable.[2] With a short transition period, an overall low level of economic development, a large carbon emissions base, inadequate resource endowments, and high costs, among many other challenges and difficulties, achieving carbon neutrality will be exceptionally difficult.

Kazakhstan currently trails behind other world-leading energy exporters in terms of energy efficiency and energy diversity. As Suma Chakrabarti, Presidential Adviser on Economic Development and Effective Governance, noted: "Kazakhstan is one of the most energy-intensive countries in the world, with energy-intensive and extractive industries accounting for 60 per cent of Kazakhstan's industrial production … Kazakhstan must reduce the energy intensity of its traditional industries and shift its economic base to new, less resource-intensive sectors and as part of a new diversification drive."[3] By implication, global decarbonization and transition to a green economy are likely to result in a reduction of Kazakhstan's hydrocarbon exports, or a 40% decline in fiscal revenues by 2040 (compared to 2016).[4]

The cost of the transition itself will be enormous for Kazakhstan. Due to the severe age of the country's power facilities, the government must undertake significant investments to upgrade equipment by 2030, even in the absence of a decarbonization target. To ensure the 'carbon neutrality' target of reducing 9.3 million tonnes of CO2 emissions by 2060, a cumulative net investment of US$666.5 billion is expected between 2021 and 2060.

The scientific community has proposed many practical solutions for adaptation, including technical, financial, political, and even managerial approaches. While all of these are viable solutions, they do not consider the current lack of financial and technical capabilities of Kazakhstan and other affected Central Asian countries to implement these solutions on a national scale. If these measures are to succeed, they will require significant mobilization of funds and far-reaching international cooperation at an unprecedented scale.[5]

For Kazakhstan, the major strategy involves the construction of numerous green energy facilities over the past two

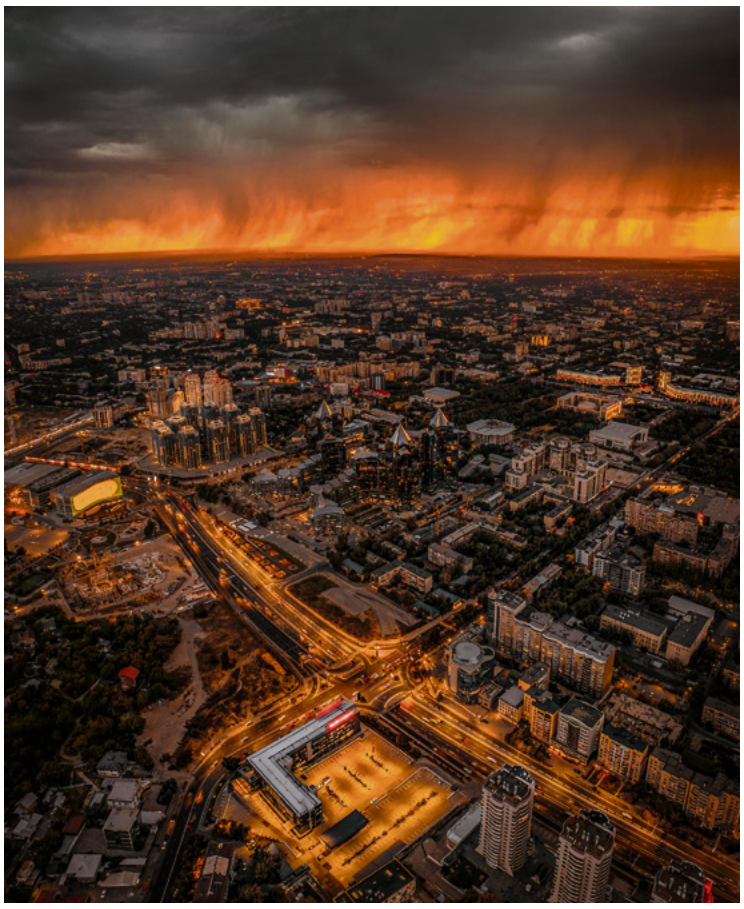

Fig. 2: Sunset on a rainy day in Almaty city. Drone view (Photo courtesy of Islam Mirsaitov, 2020).

years. In 2020 alone, 25 renewable energy projects with a total capacity of almost 600 megawatts and a total investment of just over US$5 billion will be commissioned. This year has maintained the encouraging trend, with 22 projects totalling 450 megawatts receiving the green light and attracting $445 million in investors. Between 2022 and 2026, over US$2.5 billion will be invested in more than 60 new green energy projects, adding another 2400 megawatts to Kazakhstan's national grid. Policymakers and investors are particularly focused on the emerging 'green hydrogen' technology, with a massive 45-gigawatt project planned. In addition to large-scale energy projects, Kazakhstan also plans to accelerate its green transition – a national project to increase the absorption potential by planting more than two billion trees by 2025 is currently underway.[6]

Despite significant progress in Kazakhstan's environmental governance, action to reduce air pollution and waste and to improve water efficiency has so far been insufficient. Currently, Kazakhstan's national emissions management system monitors only 40% of greenhouse gas emissions. In the future, Kazakhstan will need to establish a stricter system for limiting emissions and improving waste management, to develop a comprehensive renewable energy strategy, and to increase investment in the decarbonization sector to US$273 billion between 2021 and 2030. These goals can only be achieved if phased and systematic measures are taken. While the new environmental law aspires to bring about change, administrative incentives in the environmental behaviour of economic entities and other activities dominate the national environmental regulatory mechanism. The instruments of market management and social impact on the environment are not yet widespread. Therefore, the current legal regulation of economic incentives for environmental management is ineffective.[7]

The significance of national ownership in decarbonization efforts

On January 2nd, 2022, in temperatures of minus-20 degrees Celsius, social protests over the price hike of liquefied petroleum gas (LPG) broke out in Zhanaozen, Aktau, and Almaty. Rather than simply an organized collective mobilization, local economic grievances quickly spilled over into riots. Violent incidents ensued, such as the storming of government institutions, attacks on law enforcement officers, and even armed assaults. The riots left more than 4500 people injured and 230 dead, including 19 law enforcement officers. Economic losses were estimated at 136.8 billion tenge (equivalent to US$310 million). From the government reports, the incident is considered a terrorist attempt to overthrow the state and has been widely framed as the worst political crisis since Kazakhstan's independence in 1991. Although rising gas prices might seem a typical source of social protest elsewhere, Kazakhstan's dependence on oil and gas revenues reflects a wider political crisis, whereby the basic social contract between the state and its citizens is in question.[8]

As a starting point, the development of a green economy is not a purely economic issue, but a matter of political and security importance. At home, amidst the context of high international oil prices, whenever oil and gas production capacity are incapable of increasing foreign exchange earnings, domestic politics lead to intense social conflicts between the government on the one hand, and special interest groups and the wider public on the other hand. While the government pursued an economic strategy based on increasing the pace and scope of oil and gas extraction, other key industries have been underdeveloped, leading to the typical "Dutch disease" effects of commodity specialization. In turn, rising gas prices that are passed onto the citizens in an oil-based economy have periodically led to social discontent and, as the 2022 incident demonstrated, a rapid spiral into social unrest.

Kazakhstan's path to decarbonization – an opportunity or pitfall?

While COP26 is often framed in Western media as the most important climate conference to achieve national climate targets, for oil-exporting states, the COP26 reflects the changing geopolitical dynamics associated with the clean energy transition. At a general level, COP26 failed to resolve the so-called ecological debt of the industrialized world. Much of the tension stems from the mistrust between developed and developing countries, with rich countries continuously putting pressures on poor countries to accelerate their energy transition. By contrast, many emerging economies claim that rich countries should increase their financial support for climate adaptation to help the developing world. Take coal as an example. India and China have joined forces to soften the language on coal in the final agreement, changing the term from "phasing out" to "phasing down" coal production. In so doing, these countries have framed their positions as champions of the interests of developing countries. Kazakhstan, as one of the first signatories of the Paris Agreement, recognizes the need for a new growth model that incorporates the environmental and climate impacts of economic development. Its strategy emphasizes the shift from a hydrocarbon-dependent economy towards green electrification. If successful, Kazakhstan could serve as a model for other oil-exporting economies which face the unique challenge of simultaneously accelerating clean energy and reducing oil dependency. As the Kazakh government argues, "the fight for climate change and sustainable development appears ... to be unavoidable... and thus all our economic development plans should be aligned with the global agenda."[9]

Yet, the challenges remain formidable. As the COP26 negotiations clearly illustrate, compensation for climate policies and demand for the EU and other industrialized countries to contribute more will not disappear from political debates. After all, developing countries are not the main emitters of greenhouse gases; instead, they are the recipients of an economic system built around the intensive and extensive exploitation of coal and natural resources. The demand for climate action might also have an unintended consequence: calling for immediate decarbonization is also compressing the "developmental space" of developing countries by preventing them from using previous industrialization strategies learned throughout the last three centuries. On the one hand, the so-called *common but differentiated responsibility* principle in climate negotiations calls for shared responsibility among developed and developing countries to achieve the target of keeping global temperature at 1.5 degrees Celsius, highlighting the varied contributions of particular countries toward carbon emissions. On the other hand, developing countries, often led by China since the early 2000s, have persistently called for the "right to development" as an equally important principle in any burden-sharing framework towards decarbonization. The latter principle is underpinned by three important factors that justify lower carbon emissions reduction commitments for the rest of the world – namely, (1) the highly differentiated rates of historical carbon emissions, (2) differences in the structure of national economies under the current conditions of globalization, and (3) differences in the financial and technological capacity of countries.[10]

To sum up briefly, decarbonization can be made compatible with economic growth. This viewpoint can drive developing countries to embrace the necessary shift towards an economic development model that combines green transition with regulated extraction of mineral and energy wealth. After the riots in early 2022, Kazakhstan's new president has been determined to undertake bold reforms to address long-term issues. There is hope of moving away from the country's current oil-based economic structure. This has the promise of increasing the government's focus on domestic livelihoods, and it sets the stage for the country to gradually move away from a crude oil resource export approach to a people-centred development philosophy. The future trajectory is heading towards the development of green transformation and an environmental governance regime for oil-exporting economies.

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Fig. 3: Almaty TV tower against the backdrop of mountains on a rainy day (Photo courtesy Islam Mirsaitov, 2022).

Notes

1 Жанна Шаяхметова, 'Kazakhstan's Climate Conundrum', The Astana Times, 12 November 2021, https://astanatimes.com/2021/11/kazakhstans-climate-conundrum/.
2 Darzhan Kazbekova, 'Opinion – Challenges to Kazakhstan's Transition to the Green Economy', *International Relations*, 2020, 3.
3 European Bank, 'The Fiscal Implications for Kazakhstan of Worldwide Transition to a Greener Global Economy, 2018', 2018.
4 European Bank, 'The Fiscal Implications for Kazakhstan of Worldwide Transition to a Greener Global Economy, 2018', 2018.
5 'Review: How Environmental Safety Ensured in Kazakhstan - Official Information Source of the Prime Minister of the Republic of Kazakhstan', accessed 28 July 2022, https://primeminister.kz/en/news/reviews/review-how-environmental-safety-ensured-in-kazakhstan.
6 Kristopher D White, 'Environmental Issues in Kazakhstan', n.d., 8.
7 Lyazzat Nugumanova et al., 'Environmental Problems and Policies in Kazakhstan: Air Pollution, Waste and Water', n.d., 47.
8 'Economics, The Unavoidable Core of Kazakstan Protest', The Geopolitics, 24 January 2022, https://thegeopolitics.com/economics-the-unavoidable-core-of-kazakstan-protest/.
9 Sustainability Times, 'Kazakh Leadership Reaffirms COP26 Pledge, Hopes to Jolt Economy', *Sustainability Times* (blog), 8 December 2021, https://www.sustainability-times.com/low-carbon-energy/kazakh-leadership-reaffirms-cop26-pledge-hopes-to-jolt-economy/.
10 Ariel Cohen, 'Post COP26: Kazakhstan Proposes An Emerging Market Model For The Green Energy Transition', Forbes, accessed 28 July 2022, https://www.forbes.com/sites/arielcohen/2021/11/29/post-cop26-kazakhstan-proposes-an-emerging-market-model-for-the-green-energy-transition/.