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"GREEN KAZAKHSTAN": ITS RELEVANCE TO THE DOMESTIC AND INTERNATIONAL CLIMIATE AMBITIONS OF THE REPUBLIC OF KAZAKHSTAN

Climate change makes and shapes the globalized world in important ways. As the COVID-19 pandemic brings the health of the human race and the health of the Earth to the forefront of world politics, urgent action to combat climate change and its impacts has been called for. Given the pledge of President Kassym-Jomart Tokayev that Kazakhstan is to reach carbon neutrality by 2060, this research paper aims to investigate the Republic's domestic and international climate ambitions with specific attention paid on the national development project "Green Kazakhstan." The research question is: to what extent are Kazakhstan's domestic and international climate ambitions complementary, or disparate? Constructivism is employed as the theoretical framework to unveil the domestic challenges faced by President Tokayev to pursue a low-carbon transition in referral to Kazakhstan's latest foreign policy concept, supplemented by the use of quantitative results produced by the Climate Change Performance Index and the Global Carbon Project to assess the Republic's capability and responsibility to display a climate ambition. The findings indicate that Kazakhstan's domestic and international climate ambitions are considered disparate on most occasions but nonetheless have undeniable domestic and international significance.

Key words: Kazakhstan; capability; climate; emissions; energy; environment; green; responsibility

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"Жасыл Қазақстан": оның Қазақстан Республикасының ішкі және халықаралық климаттық амбициялары үшін өзектілігі

Климаттың өзгеруі жаһанданған әлемді маңызды жолдармен қалыптастырады. COVID-19 пандемиясы адамзат денсаулығы мен Жердің денсаулығын әлемдік саясаттың алдыңғы қатарына шығаратындықтан, климаттың өзгеруі мен оның салдарымен күресу үшін шұғыл шаралар қажет. Президент Қасым-Жомарт Тоқаевтың 2060 жылға қарай Қазақстан көміртегі бейтараптығына қол жеткізуі керек деген уәдесін ескере отырып, бұл зерттеу жұмысы "Жасыл Қазақстан" ұлттық даму жобасына ерекше назар аудара отырып, республиканың ішкі және халықаралық климаттық амбицияларын зерттеуге бағытталған. Зерттеу мәселесі мынадай: Қазақстанның ішкі және халықаралық климаттық амбициялары бір-бірін қаншалықты толықтырады немесе салыстыруға келмейді? Конструктивизм Қазақстанның сыртқы саясатының соңғы тұжырымдамасына сәйкес төмен көміртекті ауысуды жүзеге асыру үшін Президент Тоқаев бетпе-бет келіп отырған ішкі мәселелерді ашу үшін теориялық негіз ретінде, климаттың өзгеру тиімділігінің индексі және республиканың климаттық амбициялау қабілеті мен жауапкершілігін бағалау үшін жаһандық көміртегі жобасының көмегімен алынған сандық нәтижелерді пайдаланумен толықтырылып қолданылады. Алынған нәтижелер Қазақстанның ішкі және халықаралық климаттық амбицияларының көп жағдайда салыстыруға келмейтіндігін көрсетеді, бірақ, соған қарамастан, сөзсіз ішкі және халықаралық маңыздылығы бар.

Түйін сөздер: Қазақстан; әлеует; климат; шығарындылар; энергия; қоршаған орта; жасыл; жауапкершілік

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“Зеленый Казахстан”: его актуальность для внутренних и международных климатических амбиций Республики Казахстан

Изменение климата важными способами создает и формирует глобализированный мир. Поскольку пандемия COVID-19 ставит здоровье человечества и здоровье Земли на передний план мировой политики, требуются срочные действия по борьбе с изменением климата и его последствиями. Учитывая обещание Президента Касым-Жомарта Токаева о том, что Казахстан должен достичь углеродной нейтральности к 2060 году, эта исследовательская работа направлена на изучение внутренних и международных климатических амбиций Республики с уделением особого внимания национальному проекту развития “Зеленый Казахстан”. Исследовательский вопрос заключается в следующем: в какой степени внутренние и международные климатические амбиции Казахстана дополняют друг друга или несопоставимы? Конструктивизм используется в качестве теоретической основы для раскрытия внутренних проблем, с которыми сталкивается Президент Токаев для осуществления низкоуглеродного перехода в соответствии с последней концепцией внешней политики Казахстана, дополненной использованием количественных результатов, полученных с помощью Индекса эффективности изменения климата и Глобального углеродного проекта для оценки способности и ответственности Республики проявлять климатические амбиции. Полученные результаты показывают, что внутренние и международные климатические амбиции Казахстана в большинстве случаев считаются несопоставимыми, но, тем не менее, имеют неоспоримое внутреннее и международное значение.

Ключевые слова: Казахстан; потенциал; климат; выбросы; энергия; окружающая среда; зеленый; ответственность

Introduction

The Republic of Kazakhstan is one of the largest countries in the world on stocks of hydrocarbonic raw materials. With an impressive 40-year reserves-to-production (R/P) ratio for oil, 35 R/P for natural gas, and 150 R/P for coal (Cohen, 2019), energy resources – oil in particular – were described by former president Nursultan Nazarbayev (1991-2019) as an enormous wealth: “the very ‘key of gold’ that would enable us to open the door to welfare and independence”. The Kazakhstan 2030 Strategy, announced in 1997, detailed five points for the energy resources utilization strategy, which also hinted the significant role of petroleum in the Republic’s multi-vector foreign policy, economic security and energy security since the first decade after independence: (1) concluding long-term contracts with major international oil companies in order to obtain technologies and know-how and attract major companies to ensure that the natural resources of the Republic are effectively exploited; (2) building a pipeline system for oil and natural gas exports; (3) attracting investments from the United States, Russia, China, Japan and Western Europe in Kazakhstan’s oil and natural gas sector; (4) maintaining self-sufficiency and competitive independence of domestic energy infrastructure through foreign investments; (5) sensible spending of future revenues (Address of the President. 1997). Although Kazakhstan’s potential in utilizing solar and wind energy was mentioned in this document, renewable energy projects and negative effects caused by the extractive economic model on human and ecological security were not given sufficient weight in the Republic’s policy-making until 2012 when the Kazakhstan 2050 Strategy was introduced.

Reflecting the declaration in the Kazakhstan 2050 Strategy that “the era of hydrocarbon economy is coming to its end,” development of alternative and green energy technology had emerged to become a policy orientation in Kazakhstan (Address by the President, 2012). In 2013, with the adoption of the Concept on Transition to a Green Economy until 2050, the ambitious plan to increase the share of renewable energy in electric power generation to 3% by 2020, 10% by 2030 and 50% by 2050 was outlined (Concept, 2013). Kazakhstan’s hosting of EXPO-2017 under the theme “Future Energy” in 2017 further underlined the regime’s determination to seek a renewable energy future for the Republic. However, environmental degradation through continual depletion of resources has already resulted in biodiversity loss, reduction of air quality, water scarcity and declining quality food. Together with the practical needs to reduce greenhouse gas (GHG) emissions, it came as no surprise that “environmental protection, rational management of water resources

of transboundary rivers, development of alternative and renewable energy sources" were on the agenda when current president Kassym-Jomart Tokayev's (2019-present) made his state visit to neighbouring China in 2019 (Kazakhstan and China, 2019). In 2020, at the 75th session of the United Nations General Assembly, Tokayev said that "Kazakhstan is very vulnerable to the various effects of climate change". The consequences of the Aral Sea and Semipalatinsk nuclear test site, the melting of glaciers, and desertification were among several of the major environmental issues for Central Asia as well as for other nations (Shayakhmetova, 2021).

Being aware of the extremely small weight of renewable energy sources in Kazakhstan's electricity generation, besides pledging to reach carbon neutrality by 2060 during the Climate Ambitions Summit held online at the end of 2020, the Republic's climate ambition had been displayed in a series of decisions made by Tokayev – a proclaimed "firm supporter of clean energy and green technologies as a whole" (Satubaldina, 2021) – in subsequent years. First and foremost, in order to comply with the United Nations Sustainable Development Goals and the Paris Climate Agreement, the Kazakhstan government adopted a new Environmental Code – which was worked out in accordance with the principles of the Organisation for Economic Co-operation and Development (OECD) and the European Union. Under this Code, the 50 largest enterprises that account for 80% of emissions in Kazakhstan are required to replace their old technologies with the best available technologies by 2025 (Shayakhmetova, 2021). Following the announcement of the National Development Plan Through 2025 and a new green energy target that raised the share of renewable energy sources in electricity generation from Nazarbayev's 10% to 15% for 2030 (Erubaeva, 2021), Tokayev adopted the Ten National Development Projects on October 13, 2021, of which "Green Kazakhstan (Zhasyl Kazakhstan)" – developed by the Ministry of Ecology, Geology and Natural Resources in parallel with the Doctrine of Carbon Neutral Development until 2060 – set greening the economy and environmental protection as the agenda of the Republic's imminent economic course. Four streams were consisted: (1) "Taza Kazakhstan", in which measures were to be taken to improve the quality of atmospheric air, waste management and preservation of ecosystems of water bodies of the Republic; (2) "Unemdi Kazakhstan", which was about increasing productivity through economical use of water and energy efficiency improvement; (3) "Tabigat", in which 2 billion trees were to be planted and the number of rare and endangered species of animals are to be restored; and (4) "Ecologia Bolashagy", which was aimed at increasing the level of environmental education and culture of the population (Government, 2021).

When Tokayev made his remarks in 2021 that "it is important to understand that at this stage of world development, the status, reputation, and the international capabilities of any country will be largely determined by the contribution to the decarbonization of the world economy (Satubaldina, 2021)," he had implied that Kazakhstan's policy orientation was in need to entail a broader ecological perspective on common human interests, mutual benefits and win-win results if the Republic was to be positioned positively in the international arena. In fact, with global policy agenda since the COVID-19 pandemic increasingly interwoven with the health of the Earth and the health of the human race, an ecocentric value-based approach to domestic and foreign policy-making has begun to resonate across the globe. This research paper aims to investigate Kazakhstan's domestic and international climate ambitions with specific attention paid on national development project "Green Kazakhstan." The research question is: to what extent are Kazakhstan's domestic and international climate ambitions complementary, or disparate? Widely acknowledged as a post-Soviet petrostate, a developing middle-income economy and one of the worst-performing countries when it comes to GHG emissions, Kazakhstan's capability and responsibility to contribute to climate change mitigation are analysed.

Literature review and hypothesis

Following the COVID-19 pandemic, many countries have proposed for "green recovery" by putting emphasis on climate action and environmental sustainability while reviving the economy. However, green recovery programmes vary with countries, and ranking of countries' climate ambitions is sensitive to which metric is used to quantify ambition. One key indicator that is reflective to a country's capability to display its climate ambition is its climate finance for domestic and international climate action. Page's (2008) "ability to pay" principle argues that countries with the greatest resources can reasonably be required to contribute more to tackling the problem (Page,

2008). However, sufficiency of economic resources is by no means a conclusive factor as Halimanjaya (2015) observes a negative correlation between gross domestic product (GDP) per capita and international climate financing (Halimanjaya, 2015). Madden (2014), likewise, discovers that higher-income developed countries do not necessarily adopt highly ambitious domestic climate policies (Madden, 2014). As the shift to a climate-friendly low-carbon economy is largely a shift toward the use of energy efficiency and renewable energy technologies, the level of their adoptions is another key indicator of a country's capability. The study of Adua et al. (2021) on the United States confirms the effectiveness of these technologies to reduce GHG emissions but other important actions, such as lifestyle modifications, should not be neglected (Adua, 2014). Hepburn et al. (2020) propose a "division of labour" model with respect to different countries' capabilities in response to post-pandemic green recovery to achieve globally agreed climate goals, in which the world community is divided into two categories: industrialised countries, and lower- and middle-income countries. Industrialised countries are recommended to focus on backing "clean physical infrastructure", such as solar or wind farms, upgrading electric grids or boosting the use of hydrogen, together with retrofits to improve building efficiency, education and training, projects to restore or preserve ecosystems, and research into clean technologies. While all these are applicable to the lower- and middle-income countries, support for farmers to invest in climate-friendly agriculture was considered a higher priority for them. (Hepburn, 2020).

It is worth noting that one of the most relevant factors in climate mitigation policy is the extent to which a country is responsible for causing anthropogenic climate change. This norm is internationally codified as the principle of Common But Differentiated Responsibilities and Respective Capabilities (CBDR-RC) in Article 3.1 of the United Nations Framework Convention on Climate Change (UNFCCC) (1992), which states that countries – the Parties – "should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof. (United Nations, 1992) This implies the logic that: the larger the pollution a country makes, the greater the responsibility it has for causing climate change, and the heavier the burden it has in tackling climate change.

Hypotheses. The literature review results in these two hypotheses regarding Kazakhstan's capability and responsibility in response to climate change mitigation:

1. If Kazakhstan has a high domestic climate ambition and a middle-income economy, then an average international climate ambition is displayed by the Republic in accordance with its capability.

2. If Kazakhstan has a high domestic climate ambition and produces large greenhouse gas emissions per capita, then a high international climate ambition is displayed by the Republic in accordance with its responsibility.

Methodology and theoretical framework

Kazakhstan's recent policy orientation cannot be understood without addressing the Republic's emergence as both a fossil fuel producer and a green advocate under President Tokayev in response to the modern international relations system. When analysing the research question posed in this research paper, in addition to using a qualitative method to define the weight of climate change in Kazakhstan's foreign policy, quantitative results produced by other external agencies can serve as supplements to unveil the essence of Kazakhstan's domestic and international climate ambitions. On this basis, a theoretical framework formulated by constructivism is employed to analyse the decree On Concept of the Foreign Policy of the Republic of Kazakhstan for 2020-2030 – announced by Tokayev on March 6, 2020 – with respect to the national development project "Green Kazakhstan". Constructivism is an approach to social analysis based on these basic assumptions: (a) human interaction is not shaped by material factors, but primarily by ideational ones; (b) the most significant ideational factors in this context are inter-subjective beliefs as shared collective understanding; and (c) these beliefs construct the actors' identities and interests (Finnemore, 2001). Among these assumptions, the most innovative scholarly contributions of constructivism to the field of international relations would be the argument that state's identity shapes its interests, preferences, and behaviors – which makes it possible to integrate changes to the actors' interests into the research framework. Alexander Wendt and Peter Katzenstein argue that states can have multiple identities that are socially constructed through interaction with

other actors. According to Wendt (1992), "identities are the basis of interests" and "actors do not have a portfolio of interests that they carry around independent of social context; instead, they define their interests in the process of defining situation" (Wendt, 1992). Katzenstein (1996), however, proposes that identity is commonly articulated as "varying constructions of statehood" and "varying national ideologies of collective distinctiveness and purpose" across countries; therefore, these variations in turn constitute state interests which have a further influence on state policy (Katzenstein, 1996).

The analysis of the Concept by the use of constructivism is accompanied by the use of quantitative results provided by the Climate Change Performance Index (CCPI) – an independent monitoring tool published by Germanwatch, with analysis of countries' climate protection performance – to measure the Republic's climate ambition based on experts' evaluation of its domestic climate policies compared with its potential capability. The CCPI indicators and subindicators are particularly helpful as they cover a wide range of issues, including energy efficiency, the promotion of renewable energies and efforts to reduce emissions from electricity production, manufacturing, transport, deforestation, forest degradation and national peatland protection efforts, etc. (Burck, 2021) – which correspond with various type of climate action recommended to any countries. In a similar manner, to measure the scale of responsibility that Kazakhstan ought to bear for contributing to anthropogenic climate change, the Global Carbon Project (GCP)'s dataset on the Republic's carbon emissions for the past three decades is referred to. As a platform that was formed to support policy debate and action to slow down and ultimately stop the increase of GHG in the atmosphere, the GCP's account of emissions produced by Kazakhstan helps explain Tokayev's concerns for the Republic's international prospects and the considerations behind "Green Kazakhstan".

Results

An analysis through constructivism. The adoption of the decree On Concept of the Foreign Policy of the Republic of Kazakhstan for 2020-2030 had its symbolic meaning as it was the first document of the appropriate level approved by Tokayev as President of Kazakhstan and, for the first time, the horizon of foreign policy planning was extended to a decade. While continuity in exercising his predecessor's endorsed political course could be traced – such as the continual pursuit of a multi-vector and well-balanced foreign policy with the great powers, the economic dimension of Kazakhstan's foreign policy had seen a simultaneous proliferation. The number of its constituent priorities, compared to the previous Concept, increased from 9 to 14 (Chebotaryov, 2020). Kazakhstan's investment cooperation with foreign partners was concretized through listing the economy sectors requiring foreign investment, such as mechanical engineering, appliance industry, agriculture, light manufacturing, healthcare, education, transport, tourism, etc. Besides, the configuration of the Concept was set to promote the development of Kazakhstan's transit and logistics potential, including the introduction of an "open skies" regime, the expansion of the range, volume and geographical destinations of national exports, dismantling various export barriers in foreign markets, as well as the promotion of institutions like the Astana International Financial Centre, The Khorgos International Centre for Cross-Border Cooperation and created jointly with Uzbekistan the Central Asia Centre for Trade and Economic Cooperation. Increased engagement with non-state international and regional economic and financial actors – such as the OECD, the International Monetary Fund, the World Bank Group, the Asian Infrastructure Investment Bank, the European Bank for Reconstruction and Development, the Asian Development Bank, the Eurasian Development Bank, the European Investment Bank, the Islamic Development Bank and other institutions – also was set among other foreign policy priorities (On the Concept, 2020). These specific features – a new level of "economization" of foreign policy – demonstrated a shift in the configuration of the Republic's identity as it no longer solely focuses on promoting the raw-materials sectors but developing a diversified economy that attracts global business in preparation for a more balanced domestic economic structure and a low-carbon future.

There is little doubt that Kazakhstan's climate ambition could only be found at very mild levels in the Concept. Compared to the previous Concept in which terms such as "climate", "environment" and "green" were mentioned 11 times, this Concept only referred them 6 times in total. This implies that Tokayev – as a new Head of State and a career diplomat, before bringing a low-carbon transition to the forefront of Kazakhstan's domestic and foreign policy-making – had to first take into account the change competency of his administration and the informal networks composited by the Republic's

oligarchs and political elite with respect to Kazakhstan's need to take on an identity as a green advocate in accordance to the global trends. It is also noteworthy that – unlike fossil fuel extraction and the perpetuation of fossil fuel dependence that concentrate wealth and power among a few corporate and political elite – the movement for a renewable energy transition potentially includes grass-roots activism, technological innovation and efforts to restructure governance systems for community-controlled and dispersed energy systems (Stephens, 2019). Such movement has been termed "democratization of energy resources" (Van der Schoor, 2016) – which was best demonstrated by progressive environmental and social justice movement that built the Green New Deal in the United States in 2018. Energy-related mass agitations in France, Ecuador, Pakistan, Iran, Zimbabwe and Lebanon since 2018 – in which ordinary people faced the unpleasant effects of fuel subsidy cuts or new fuel tax caused by their governments' respective responses to either global decarbonisation movement or market forces (Kasturi, 2022) – are of exceptional importance as references to the policymakers in Kazakhstan. According to the trajectory made by ex-Minister of Energy Magzum Mirzagaliyev (2021-2022) in 2021, oil production was expected not to decrease but to grow from 85.7 million tons and reach 104.2 million tons by 2030 (Nurmaganbetova, 2021), illustrating the continual dominance of petroleum in Kazakhstan's policy orientation and identity configuration.

Having experienced the worst mass riots triggered by a sudden spike in prices for liquefied gas – with hints of intra-elite conflict – in January 2022, the national development project "Green Kazakhstan" is best speculated as one of Tokayev's measures to consolidate the public support in the aftermath of chaos through creating a favourable living environment rather than a display of the Republic's international climate ambition. In this context, the two hypotheses of this research paper regarding Kazakhstan's international climate ambition cannot be verified, indicating the disparity between Kazakhstan's domestic and international climate ambitions.

An analysis on capability. Considering the national development project "Green Kazakhstan" is still in its infancy with few impacts being registered, Kazakhstan had marked a "very low" rating among all the CCPI categories and was ranked to the lowest spot with an overall score 19.23 as of January 2022 among the 60 countries that the CCPI has been conducting analyses on – in contrast to top-performing country Denmark's 76.67. Between 2020 and 2021, many shortcomings were expressed about Kazakhstan's climate change performance, in addition to the insufficient energy efficiency measures, the heavily subsidised energy prices and coal, and high emissions found in the transport sector due to vehicles non-compliant with European emissions standard being imported into the Republic. The only indicator in which Kazakhstan was able to score respectably was "Renewable Energy – current trend (excluding hydropower)" – with a "medium" rating, which could be considered as an acknowledgement of Kazakhstan's accomplishment in reaching its 3% renewable energy target by 2020 and ambition of having a 15% – an increase from the original 10% – renewable energy share in its national energy matrix by 2030. However, the CCPI experts commented that planned renewable energy production seemed to be for foreign investors and there was a lack of support for individual renewable energy stations for the domestic population (Burck, 2021). Overall, Kazakhstan's lack of meaningful climate change performance for the past three decades has implied the Republic's lack of capability to display a convincing international climate ambition, which undermined the Republic's presumed capability as a middle-income economy. Hypothesis 1 of this research paper is not in compliance with the quantitative findings from the CCPI, indicating the disparity between Kazakhstan's domestic and international climate ambitions.

An analysis on responsibility. According to the 2020 Global Carbon Atlas produced by the GCP based on level of carbon emissions from human activity, Kazakhstan was ranked 20th among all countries in the world – with a total of 291 megatons of carbon dioxide. If calculated by emissions per capita, Kazakhstan was 10th in the world; and by emissions per GDP, 7th (Friedlingstein, 2021). When analysing Kazakhstan's fossil emissions, coal had maintained its position as the top source of GHG emissions (Andrew, 2022). Regarding the annual growth rate of energy consumption from 2015 to 2020, while coal, oil and gas all had registered low- to mid-single digit growth, the biggest growth was found in renewable energy – from 0% to 52.9% in five years (Andrew, 2022). However, renewable energy had not been deployed at a scale that could replace fossil fuels and curbs emissions in the near future. In 2020, Coal's 1.65 Exajoule (EJ), oil's 0.75 EJ and gas' 0.60 EJ were by far more

significant for Kazakhstan's energy security than hydropower's 0.08 EJ and renewable energy's 0.03 EJ (Andrew, 2022). The quantitative findings from the GCP illustrate that Kazakhstan's economy has been extremely carbon-intensive, meaning the Republic has an indisputable responsibility to proactively contribute to climate change mitigation as itself is at the core of the solution. The national development project "Green Kazakhstan" thus could be understood as a timely response from the regime before consequences of inaction will become too costly to bear, in particular Kazakhstan has frequently declared itself as a "responsible participant in the world community" (On the Concept, 2020). In this connection, hypothesis 2 of this research paper cannot be refuted, in which Kazakhstan's responsibility as a large producer of GHG emissions per capita prompts it to display high domestic and international climate ambitions. Kazakhstan's domestic and international climate ambitions can be considered complementary.

Discussions

Although the analyses above demonstrate that the national development project "Green Kazakhstan" is the results of the regime's efforts to consolidate public support and Kazakhstan's declared responsibility to the international community, the Republic's ties with the European Union and China – leaders in energy transition, green tech and ecological restoration – have to be taken into account when analysing Kazakhstan's overall climate ambitions. Aiming to become the first carbon neutral continent by 2050 and being the biggest investors in Kazakhstan, the European Union's carbon border adjustment mechanism – a tax on carbon-intensive imports – to compel non-member countries to implement more aggressive climate rules from 2026 onwards has already prompted the Tokayev's government to accelerate decarbonisation progress across seven sectors of the economy – energy, agriculture and forestry, industry, utilities, coal industry, waste management, and transport – between 2023 and 2030 by collaborating with the World Bank on the Partnership for Market Readiness Programme, which provides short- to medium-term policy recommendations and builds capacity to support Kazakhstan on its path to carbon neutrality (Marteau, 2021). The Republic's plan to build the world's largest green-hydrogen project – in cooperation with Swedish-German renewable energy firm Svevind – further represents the investment of European Union's private sector in Kazakhstan no longer rests on carbon-intensive petroleum but tech-based energy solutions, supporting the Republic's domestic and international climate ambition.

China's experiences in embedding ecological restoration in its economic development are equally influential to Kazakhstan's low-carbon transition pathways, especially after the launch of China's massive infrastructure diplomacy in the format of the "Belt and Road Initiative (BRI)" in 2013 and an upgraded "Green BRI" in 2017. The slogan "to build the community of a shared future for humanity" implied the promotion of global environmental governance and green development concept among participating countries – neighbouring Kazakhstan included – in compliance with the United Nations' Sustainable Development Goals and the Paris Climate Agreement (Dong, 2020). In addition to China's dominance of renewable energy supply chains, its domestic sustainability programmes – such as the Grain for Green Programme, the Natural Forest Conservation Programme, and the Three North Shelterbelt Programme – have successfully slowed and reversed desertification with the planting of a 4,500km Great Green Wall (Bryan, 2018). Rather than focusing on merely tree planting, artificial intelligence (AI) has been applied to forecast air pollution, track pollution sources and produce potential strategies in response, such as restriction to the number of drivers or closure of certain power plants in order to reduce pollution in a particular area (Cho, 2018). It was reported that research teams from Saudi Arabia and Pakistan were attracted to conduct studies on China's greening work and its green tech (Campbell, 2017), suggesting that China's experience can serve as a roadmap for other developing countries. In 2020, a USD$1.4 trillion low-carbon stimulus package was adopted to revive China's economy as well as those along the BRI between 2020 and 2025 (The Energy, 2020). The construction of Central Asia's largest wind farm near the city of Zhanatas in the Zhambyl Region, south Kazakhstan – a renewable energy project funded by the Asian Infrastructure Investment Bank and completed by a Chinese firm in 2021 – demonstrated the significance of China's contributions to Kazakhstan's domestic climate ambition despite the COVID-19 pandemic (Feature, 2021).

Although the European Union's carbon border tax and China's Green BRI appear to have exceeded the designated scope of "Green Kazakhstan", a careful inspection of the Ten National Development

Projects shows that the projects enclosed are indeed mutually complementary and – as a whole – address human capital issues and create enabling conditions that decrease Kazakhstan's reliance on fossil fuel extraction and build a diversified innovation-based economy (Nursultan, 2021). "Green Kazakhstan" thus is not a typical stand-alone project but shares common tasks with other national development projects, in particularly "Sustainable Economic Growth", "Technological Breakthrough through Digitalization, Science and Innovations" and "The Safe Country" under other Ministries. Given Kazakhstan's growing role as a logistics pivot connecting Europe and Asia, the Republic has an advantage in its geographical location to consolidate its cooperation with multiple countries to address common development issues – including carbon mitigation, renewable energy development and ecological restoration. "Green Kazakhstan", in the context, enables the Republic – despite a lack of capability to produce any meaningful climate change performance – to resonate with other economies for climate action collectively at national, regional and global level.

Conclusion and recommedations

This research paper demonstrates that although Kazakhstan's domestic and international climate ambitions are considered disparate on most occasions, the national development project "Green Kazakhstan" – in which the intrinsic value of nature is recognised with ecological protection and restoration projects embedded – is of undeniable domestic and international significance due to Kazakhstan's needs to consolidate public support by creating a favourable living environment while presenting itself as a responsible participant in the world community. The latter, in particular, resonates with global environmental sustainability – which is set to play a prominent role in future domestic development and international collaborations. Capability – or the lack of, in terms of economic, technological and human capital resources – appears less essential to Kazakhstan's pursuit of international cooperation to combat climate change, and vice versa.

This research paper has vital implications on understanding the domestic and international climate ambitions displayed by the petroleum-exporting countries that are middle income economies. Future research can complement this study, in particular if responses of the private sector and public budgeting in specific countries for domestic and international climate action can be taken into account. For Kazakhstan, it is of utmost importance to address how the Republic can benefit from being both a petroleum producer and an advocate of a fossil-free future to assert its global presence with the minimum of friction and the maximum of goodwill.

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References

"Address by the President of the Republic of Kazakhstan, Leader of the Nation, N.Nazarbayev 'Strategy Kazakhstan-2050': new political course of the established state" (2012) Official website of the President of the Republic of Kazakhstan. Retrieved from https://www.akorda.kz/en/addresses/addresses_of_president/address-by-the-president-of-the-republic-of-kazakhstan-leader-of-the-nation-nnazarbayev-strategy-kazakhstan-2050-new-political-course-of-the-established-state

"Address of the President of the Republic of Kazakhstan, Nursultan Nazarbayev, to the People of Kazakhstan" (1997) Official website of the President of the Republic of Kazakhstan. Retrieved from https://www.akorda.kz/en/addresses/addresses_of_president/address-of-the-president-of-the-republic-of-kazakhstan-nursultan-nazarbayev-to-the-people-of-kazakhstan-october-10-1997

"Concept for transition of the Republic of Kazakhstan to Green Economy" (May 30, 2013) The Asian and Pacific Energy Forum. Retrieved from https://policy.asiapacificenergy.org/sites/default/files/Concept%20on%20Transition%20towards%20Green%20Economy%20until%202050%20%28EN%29.pdf

"Feature: Central Asia's largest wind farm built by Chinese firm to power 1 mln Kazakh homes" (2021) Xinhua. Retrieved from http://www.xinhuanet.com/english/2021-06/12/c_1310004153.htm

"Government presents national projects for development of Kazakhstan" (2021) Official Information Source of the Prime Minister of the Republic of Kazakhstan. Retrieved from https://primeminister.kz/en/news/memlekettik-vedomstvolar-kazakstannyn-ulttyk-damu-zhobalaryn-usyndy1295818

"Kazakhstan and China: a new milestone in mutually beneficial cooperation" (2019) Kazinfo. Retrieved from https://www.inform.kz/en/kazakhstan-and-china-a-new-milestone-in-mutually-beneficial-cooperation_a3564322

"Nursultan Serikbay: 'National projects are built around the needs and demands of citizens'" (2021) DKNews International News Agency. Retrieved from https://dknews.kz/en/articles-in-english/209834-nursultan-serikbay-national-projects-are-built-around

"On the Concept of the Foreign Policy of the Republic of Kazakhstan for 2020-2030" (2020) Official website of the President of the Republic of Kazakhstan. Retrieved from https://www.akorda.kz/en/legal_acts/decrees/on-the-concept-of-the-foreign-policy-of-the-republic-of-kazakhstan-for-2020-2030

"United Nations framework convention on climate change United Nations" (1992) United Nations. Retrieved from https://unfccc.int/resource/docs/convkp/conveng.pdf

Adua, L. et al. (2021) "Seeking a handle on climate change: Examining the comparative effectiveness of energy efficiency improvement and renewable energy production in the United States" Global Environmental Change, Volume 70. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S0959378021001308

Andrew, R. (n.d.) "Annual energy consumption in Kazakhstan, 2000-2020" CICERO Center for International Climate Research. Retrieved from https://robbieandrew.github.io/GCB2021/PNG/ctry/s22_EnergyBars_KAZ_EJ.png

Bryan, B. & Gao, L. (2018) "What we can learn from China's fight against environmental ruin" The Conversation. Retrieved from https://theconversation.com/what-we-can-learn-from-chinas-fight-against-environmental-ruin-99681

Burck, J. et al. (2021) Climate Change Performance Index 2022: Background and Methodology. Germanwatch. Retrieved from https://ccpi.org/wp-content/uploads/Background-and-Methodology-CCPI-2022-3.pdf

Burck, J. et al. (2021) Monitoring Climate Mitigation Efforts of 60 Countries plus the EU – covering 92% of the Global Greenhouse Gas Emissions: Results 2022. Germanwatch. Retrieved from https://ccpi.org/wp-content/uploads/CCPI-2022-Results_2021-11-10_A4-1.pdf & https://ccpi.org/country/kaz/

Campbell, C. (2017) "China's Greening of the Vast Kubuqi Desert is a Model for Land Restoration Projects Everywhere" Time. Retrieved from https://time.com/4851013/china-greening-kubuqi-desert-land-restoration/

Chebotaryov, A. (2020) "Special Aspects of Kazakhstan's New Foreign Policy Concept" Central Asian Bureau for Analytical Reporting. Retrieved from https://cabar.asia/en/special-aspects-of-kazakhstan-s-new-foreign-policy-concept

Cho, R. (2018) "Artificial Intelligence – A Game Changer for Climate Change and the Environment" Earth Institute, Columbia University. Retrieved from https://blogs.ei.columbia.edu/2018/06/05/artificial-intelligence-climate-environment/

Cohen, A. (2019) "Oil-Rich Kazakhstan Begins The Long March Towards Renewables" Forbes. Retrieved from https://www.forbes.com/sites/arielcohen/2019/10/18/oil-rich-kazakhstan-begins-the-long-march-towards-renewables/#4ce7733135c6

Dong, L. (2020) "China's renewed perception of global environmental governance" Chinese Journal of Population, Resources and Environment, Volume 18, Issue 4. Retrieved from https://www.sciencedirect.com/science/article/pii/S2325426221000036

Erubaeva, G. (2021) "Kazakhstan Sets New 'Green' Energy Target for 2030" Caspian News. Retrieved from https://caspiannews.com/news-detail/kazakhstan-sets-new-green-energy-target-for-2030-2021-5-290/

Finnemore, M. & Sikkink, K. (2001) "Taking Stock: The Constructivist Research Program in International Relations and Comparative Politics" Annual Review of Political Science, Volume 4, 2001. Retrieved from https://doi.org/10.1146/annurev.polisci.4.1.391

Friedlingstein et al., (2021) The Global Carbon Budget 2021, Earth System Science Data. Andrew and Peters (2021) The Global Carbon Project's fossil CO2 emissions dataset. Retrieved from http://www.globalcarbonatlas.org/en/CO2-emissions

Halimanjaya, A. (2015) "Climate mitigation finance across developing countries: what are the major determinants?" Climate Policy, Volume 15, 2015 – Issue 2. https://doi.org/10.1080/14693062.2014.912978

Hepburn, C., O'Callaghan, B., Stern, N., Stiglitz, J., and Zenghelis, D. (2020) "Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?" Oxford Smith School of Enterprise and the Environment, Working Paper 20-02. Retrieved from https://www.smithschool.ox.ac.uk/publications/wpapers/workingpaper20-02.pdf

Kasturi. C. S. (2022) "Kazakhstan unrest highlights tricky terrain of fuel subsidy cuts" Al Jazeera. Retrieved from https://www.aljazeera.com/economy/2022/1/13/kazahstan-unrest-highlights-tricky-terrain-of-fuel-subsidy-cuts

Katzenstein, P.J. ed. (1996) The Culture of National Security Norms and Identity in World Politics. New York: Columbia University Press.

Madden, N. J. (2014) "Green means stop: veto players and their impact on climate-change policy outputs" Environmental Politics, Volume 23, 2014 – Issue 4. https://doi.org/10.1080/09644016.2014.884301

Marteau, J.-F. (2021) "From Paris to Glasgow and beyond: Towards Kazakhstan's carbon neutrality by 2060" World Bank Blog. Retrieved from https://blogs.worldbank.org/europeandcentralasia/paris-glasgow-and-beyond-towards-kazakhstans-carbon-neutrality-2060

Nurmaganbetova, Zh. (2021) "Kazakhstan to produce 85.7 mln tons of oil this year" Kazinfo. Retrieved from https://www.inform.kz/en/kazakhstan-to-produce-85-7-mln-tons-of-oil-this-year_a3876887

Page, E. A. (2008) "Distributing the burdens of climate change" Environmental Politics, Volume 17, 2008 – Issue 4. Retrieved from https://www.tandfonline.com/doi/full/10.1080/09644010802193419

Satubaldina, A. (2021) "Kazakhstan to Increase Share of Renewable Energy to 15 Percent by 2030" The Astana Times. Retrieved from https://astanatimes.com/2021/05/kazakhstan-to-increase-share-of-renewable-energy-to-15-percent-by-2030/

Shayakhmetova, Zh. (2021) "Kazakh Ministry of Ecology, Geology and Natural Resources to Implement Projects on Pollution Reduction, Water Resources Management" The Astana Times. Retrieved from https://astanatimes.com/2021/02/kazakh-ministry-of-ecology-geology-and-natural-resources-to-implement-projects-on-pollution-reduction-water-resources-management/

Shayakhmetova, Zh. (2021) “Kazakhstan Adopts New Environmental Code with Focus on Eco-Friendly Technology in Manufacturing, More Green Projects” The Astana Times. Retrieved from https://astanatimes.com/2021/01/kazakhstan-adopts-new-environmental-code-with-focus-on-eco-friendly-technology-in-manufacturing-more-green-projects/

Stephens, J. C. (2019) “Energy Democracy: Redistributing Power to the People Through Renewable Transformation” Environment: Science and Policy for Sustainable Development, Volume 61, 2019 – Issue 2. Retrieved from https://www.tandfonline.com/doi/full/10.1080/00139157.2019.1564212

The Energy Transitions Commission (2020) Achieving a green recovery for China. Rocky Mountain Institute. June 2020. Retrieved from https://www.energy-transitions.org/wp-content/uploads/2020/07/Achieving-a-green-recovery-for-China_EN_0616-FINAL.pdf.

Van der Schoor, T., van Lente, H., Scholtens, B., & Peine, A. (2016) “Challenging obduracy: How local communities transform the energy system” Energy Research & Social Science, Volume 13. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S2214629615300967

Wendt, A. (1992) “Anarchy is What States Make of It: The Social Construction of Power Politics” International Organization 46(02), Spring, 1992. Retrieved from https://www.researchgate.net/publication/227392580_Anarchy_is_What_States_Make_of_It_The_Social_Construction_of_Power_Politics