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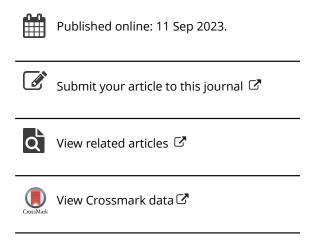
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# A WINDOW TO INDIA? THE TRILATERAL GAS UNION AND RUSSIA'S ENERGY PIVOT TO ASIA

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# A WINDOW TO INDIA? THE TRILATERAL GAS UNION AND RUSSIA'S ENERGY PIVOT TO ASIA

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#### 1. A trilateral gas union

Just a week after being formally elected President of Kazakhstan in November 2022, Kassym-Jomart Tokayev made his first official foreign visit. He chose Russia, stressing that the decision to visit "our main strategic partner" had "deep meaning, political significance and, of course, certain symbolism." Afterwards, Tokayev's press secretary Ruslan Zheldibay declared that "... the talks between the presidents of Kazakhstan and Russia in the Kremlin focused on the creation of a "trilateral gas union" between Russia, Kazakhstan and Uzbekistan with the purpose of coordinating their actions in order to transport Russian gas *through the territories* [emphasis added] of Kazakhstan and Uzbekistan." The next day, his Russian counterpart Dmitry Peskov elaborated on the idea, saying that the presidents discussed the creation of a joint company that would manage energy infrastructure passing through the three countries: "a certain legal entity for cooperation between these three countries, and for infrastructure development, then for foreign markets" – added Peskov. <sup>3</sup>

Western experts immediately saw this as an effort by Moscow to capture Central Asian gas markets and thus compensate for the export revenue lost in Europe due to sanctions imposed on Russia following the Ukraine war. This analysis did not seem to factor in the vast difference in size between the European and Central Asian gas markets. In Kazakhstan and Uzbekistan, the reactions were markedly different. The Union proposal triggered an avalanche of criticism from nationalists as well as from those who fear that new joint projects with Russia might trigger "secondary sanctions"

from the US and EU against Central Asian countries. Central Asian critics were especially concerned about the leverage Russia could achieve if it were allowed to control Kazakh and Uzbek pipeline infrastructure. Kazakh and Uzbek officials were quick to address these concerns and declared that the sovereignty of their countries was not at risk. Uzbek Energy Minister Jurabek Mirzamahmudov said: "Signing a gas agreement with Russia does not mean an alliance or union ... It would be a technical contract ... We will never compromise our national interests. Even if we [agree to receive natural gas from Russia], we will proceed via commercial sales contracts. We will not allow any political conditions to be imposed in return." He asserted that Uzbekistan would agree to receive natural gas from Russia only "at a reasonable price." The Deputy Director of Kazakhstan's Ministry of Foreign Affairs, Almas Aidarov, also noted that "there exists a natural gas deficit in all countries, so Russia came up with this offer."

The article considers these new realities of Central Asian energy politics which, for the first time, allow for the reversal of gas flows from their traditional south-to-north direction. The article argues, however, that the potential capture of relatively small Central Asian gas markets cannot explain Russia's motivations (whether political or economic) and suggests that there is a bigger picture to consider. The next section analyses the current energy situation in Central Asia and explains the reasons behind its growing energy deficit. The third section argues that explanations of the Trilateral Gas Union which focus on Russia's attempts to offset economic losses in Europe or to gain pre-eminence in a new regional "Great Game" are insufficient. Section four offers an alternative analysis: that the real potential "grand prize" of Russia's ambition is the gas markets in South Asia. Section five considers possible mechanisms that Russia could use to realise this ambition, ranging from "minimal" to "maximal". It argues that Russia's initiative would make economic sense only if the Trilateral Gas Union allows Russia to expand its natural gas exports to China (via Central Asia), while potentially setting the stage for Russian piped gas to reach South Asia. The concluding section explains Russia's longstanding desire to open up its own "window to India" and what geopolitical significance this might have if successfully realised.

#### 2. Energy scarcity in energy resource abundant nations

The history of "gas unions' in the post-Soviet era can be traced to 2002, when President Putin announced plans to create "Eurasian Union of

Natural Gas Exporters". Then, however, structural conditions were not ripe for the realisation of this ambition and, shortly after the announcement, the idea was rejected by the union's potential members.<sup>8</sup> The concept behind this earlier union was radically different from the present one. Back then, Russia's exports to Europe were booming and the Kremlin wanted to ensure stable long-term imports of gas from Turkmenistan and Uzbekistan. Given that no alternative export pipeline routes for Central Asian countries existed at the time. Russia would have been able to use its geographical position to re-sell the gas at a much higher price into the European market. In the early 2000s, natural gas production in the region was higher, and local demand much smaller, than today. 10 Moreover, the main natural gas pipeline in the region, "Central Asia-Centre" was filled with Turkmen and Uzbek gas heading north, to Russia. The newly proposed "Trilateral Gas Union" envisages gas flows via the same pipeline, but in the opposite direction. So why has Central Asia, abundant in natural gas, transitioned from being a major exporter to a region in need of imports?

Shortages of both natural gas and electricity have become a significant problem for Central Asian governments only in the past few years. Outdated infrastructure (most of which has not been modernised since the collapse of the Soviet Union) has been gradually deteriorating, resulting in frequent energy shortages. Formerly one of the region's major natural gas producers and exporters, Uzbekistan has been a net importer since 2021. 11 In January 2022, a major blackout hit Tashkent, the capital of Uzbekistan and the largest city in Central Asia. One report described "chaos across the region for several hours, with subway trains stuck in tunnels and skiers on lifts, airports closing, district heating and tap water pumps going idle and traffic lights switching off." The subsequent winter turned out to be even worse. In November 2022, a breakdown at a local power plant left Ekibastuz, a city of more than 150,000 people in Kazakhstan, with no heating. 13 In early 2023, exceptionally cold weather in Uzbekistan forced the government to ration fuel for car drivers (natural gas being the most widespread fuel for automobiles in the country) in order to redirect it for heating, which still remained inadequate throughout winter.

In order to combat this problem, Uzbekistan suspended natural gas exports to China<sup>14</sup> and Tajikistan<sup>15</sup>, while Kazakhstan<sup>16</sup> reduced gas exports to 4.6 billion cubic metres (bcm) from 7.2 bcm the previous year.<sup>17</sup> As a result, Uzbekistan turned from being a major natural gas exporter into a net importer. Some analysts have predicted that Kazakhstan may be in a

similar position within a few years. Gas production in Kazakhstan has been stagnating (dropping in the past year from about 30 bcm to 27 bcm) and longer-term plans to increase gas production have had to be scaled back due to unmet expectations from the Kashagan field. At the same time, domestic demand, which grew from 13.8 bcm in 2017–19.3 bcm in 2022, is predicted to continue rising due, in large part, to the construction of several major gas-fired power stations, intended to replace ageing coal plants.

It appears that most of the blame for this situation can be attributed to decisions by government officials in the two countries to prioritise export revenue over the improvement of domestic energy security. Central Asia produces more gas than it consumes 19 but poor planning (the mismatch between stagnating production and growing local demand) appears to be the main cause of energy deficit. Many large natural gas fields are past their peak and have not been replaced. Natural gas production in Uzbekistan was at its highest in 2008 at 63.4 bcm and has been steadily declining since then.<sup>20</sup> At the same time, Central Asian populations and economies have been growing rapidly. The population of Kazakhstan has risen from 16 million in 1991 to about 20 million today (despite the massive outflow of ethnic Russians, which by the end of the Soviet period encompassed almost half of the population in the country), while that of Uzbekistan has grown from about 20 million to at least 35 million. The Uzbek government estimated, in 2020, that national electricity consumption would double over the following decade.<sup>21</sup> These twin tendencies, increasing population and decreasing energy production, exacerbated by inefficient and "leaky" infrastructure have resulted in a drastic situation for the country. Russia's proposal for a gas union therefore came at an opportune time.

#### 3. Market loss compensation or a new great game?

Given the Western sanctions on its gas trade since the start of the war in Ukraine, one of Russia's key objectives is to restore its hydrocarbon export revenue. However, the markets of Central Asia will do little to achieve that goal. While the poor quality of statistics does not enable precise calculations, it is safe to argue that the region has a surplus of gas. In recent years, Turkmenistan, Uzbekistan, and Kazakhstan have produced roughly 150–165 bcm of natural gas annually, while local natural gas consumption in all five Central Asian countries has remained slightly below 100 bcm. Total Central Asian natural gas exports (in all directions)

stand at an annual level of about 69 bcm. 22 However, even if all Central Asian countries could direct all their natural gas output to export (which is never an option), the domestic market, less than 100 bcm, is small compared to Europe which, in the past 10 years, demanded between 480 and 570 bcm of natural gas annually. 23 Until recently Russia provided 40-45% of Europe's total natural gas imports: about 155–167 bcm.<sup>25</sup> At that time, Russia's total annual natural gas exports were estimated at around 240-250 bcm (of which 210 bcm were sent through pipelines).26 Given the fact that overall Central Asian gas production exceeds regional demand in natural gas, and that the current deficit was caused by mismanagement of export volumes, the Central Asian market may require at best 5–7 bcm of Russian natural gas, which is hardly compensation for Russia's losses in Europe. Overall, it looks more economically beneficial to Central Asian countries than to Russia.<sup>27</sup> Moreover, modernisation of the Soviet-era "magistral" (main) pipelines, the Bukhara-Ural and Central Asia-Centre routes, in order to use them in "reverse mode" would require large investment. In short, simply capturing the Central Asian gas market alone does not provide sufficient economic justification for Russia's actions.

Russia's decision to make what might seem to be economically irrational investments in the pipelines could be explained if the countries of the region were slipping away from its political influence, if Moscow were concerned about losing some kind of new "Great Game" to foreign powers. Indeed, some analysists suggest that Central Asia may yet again become an arena of a new great power rivalry, this time between Russia and China. 28 Despite a common perception of China as the new hegemon in the region, given its position as the dominant trading partner of Central Asian countries since the Soviet Union's disintegration, a recent Foreign Affairs article has argued that "Beijing is nowhere near usurping Moscow as Central Asia's true hegemon. Moreover, whatever rivalry exists is far outweighed by overlapping interests and avenues for cooperation." Despite expected competition between the region's two most influential players, we see growing cooperation in trade and development between Russia and China as well as joint efforts to resist the West in the field of security.<sup>29</sup>

Moreover, Russia has been steadily increasing its economic presence in the region, the sphere where China has been dominating in the past decades. "Russian trade with all of Central Asia is soaring, having risen by 20 percent in 2022", <sup>30</sup> from 37.5 billion USD in 2021 to over 42 billion USD, a new record high. <sup>31</sup> Moreover, in 2022 Russia became

the main trading partner of Uzbekistan, the most populous country in the region (its population roughly equals that of all other Central Asian countries combined), surpassing China. Russian FDI in Uzbekistan has doubled since 2016. 33

Furthermore, the pipeline project does not seem to bring major benefits for Russia's Central Asian politics per se. Most Central Asian countries are already members of Russian-led Commonwealth of Independent States and the Eurasian Economic Union, the organisations responsible for political and economic integration in the post-Soviet space. Kazakhstan, Kyrgyzstan and Tajikistan are also members of the Russian-led military alliance, the Collective Security Treaty Organisation (CSTO) (which was used in 2022 to stabilise situation in rioting Kazakhstan). All five Central Asian leaders attended the most symbolic celebration in Russia, the Victory Day parade in Moscow in May of 2023, more than a year after the beginning of the war in Ukraine.<sup>34</sup> Moreover, Russia is the main recipient of Central Asian labour migrants, accepting more than 10 million people in 2022 alone.<sup>35</sup> Among other things, it therefore has control over a decisive economic lever – these workers' remittances to their home countries. President Tokayev was sincere when he emphasised the importance of the 30-year-old "strategic partnership" between Russia and Kazakhstan, and similar relations between Russia and other countries, for the whole region.<sup>36</sup> In other words, given the already high level of deep political and economic interconnectedness with all Central Asian countries, there is no need for Russia to make further major investments just to enhance its "political grip".

It seems unlikely, therefore, that the desire of Russia to transport its gas *in the direction* of Central Asia (and bear the associated costs of modernising the infrastructure) is prompted by the relatively small economic gains it could receive from covering these countries' seasonal domestic shortages so that they can fulfil their export obligations towards China. It must therefore be explained by something else. After the Putin-Tokayev meeting in November 2022, Russian presidential spokesman Dmitry Peskov made a point that should be understood literally: "We're talking about the fact that this is a huge, vast territory [Kazakhstan, Uzbekistan] in a very important region, and, of course, the routes of energy supplies, gas, and so on are extremely relevant for this territory." He stressed that it is those routes which might enable transportation of Russian natural gas from Siberia, and not the local market, that is of real interest to Russia. Redirection of Russia's gas streams away from the West and towards the South via Central Asia, could now be the major goal. Russia's

geopolitical game might go far beyond Central Asia into Iran, Afghanistan, Pakistan, Bangladesh, and above all – India.

#### 4. The prize

In 2023, India surpassed China to become the most populous country in the world and, given predictions of further population growth, we can expect its demand for energy to become even greater in the future.<sup>38</sup> In 2021, natural gas accounted for a minuscule 6.5% of the country's energy mix, well below the global average of 24%, while coal, cheaper and locally available, provided 60%. 39 India is such a large energy market, however, that even 6.5% of it represented 66 bcm/year. India, unlike Central Asia, does not have its own major sources of natural gas nor any established pipeline routes into it. It thus has to rely on imports of liquified natural gas (LNG), mainly from Qatar and the US. 40 Given India's population growth, economic development and its international obligation to reduce carbon emissions, the country's demand for natural gas will probably double by 2030, making India one of the world's largest natural gas importers. 41 Overreliance on LNG, however, would place India at the mercy of the international energy market. There is intensifying competition from Europe and East Asia as Europe attempts to replace natural gas delivered through pipelines from Russia. 42 For emerging economies in South Asia, it would be expensive to compete with Europe and East Asia for LNG. 43 South Asia has become one of the main victims of the energy crisis in Europe that has resulted from the war in Ukraine. Analysts have noted that, "Europe has been outbidding Asian customers for LNG supply as it has scrambled to secure gas supply with very low pipeline imports from Russia. High spot rates for LNG have discouraged many buyers ... including in India, Pakistan, and Bangladesh."44 With the total current population of these three countries approaching two billion, their combined gas markets constitute a significant prize that could easily compensate Russia for the loss of its European market. However, shifting the local market would require the availability of cheaper and stable supplies of piped natural gas.

Any viable pipeline route from Russia to India would have to go through the territory of Pakistan. Pakistan is currently experiencing even harsher energy deficits than India and suffered major power outages during 2023. The Asian Development Bank reports that "Pakistan imports nearly a third of its energy resources in the form of oil, coal, and liquefied natural gas (LNG)." Lack of a stable source of natural gas has turned

Pakistan's LNG dependence into a nightmare.<sup>47</sup> In the words of one analyst, the "stronger U.S. dollar and the sky-high LNG prices have worsened the country's finances, with foreign exchange reserves down in October to their lowest level in three years."<sup>48</sup> This may give Pakistan and India the necessary incentives to cooperate in pipeline construction.

#### 5. Possible scenarios and challenges

There have been attempts to develop natural gas pipelines to South Asia before, but none was able to succeed. The most promising project -TAPI (Turkmenistan-Afghanistan-Pakistan-India) - was proposed in the early 1990s and the first agreements were signed in 1995. The idea was supported by various foreign companies including Unocal of the US and Delta of Saudi Arabia. It would have provided Turkmenistan, the world's sixth largest gas exporter, with an alternative outlet, reducing its dependence on Russia. However, instability in Afghanistan and the project's huge cost (estimated at about \$10 billion) caused it to fail. A new consortium, led by state-owned TurkmenGas took over the project and, in December 2015, the leaders of Turkmenistan, Afghanistan, Pakistan and India joined a "groundbreaking ceremony" and signed a Shareholders Agreement. An Investment Agreement followed in April 2016.<sup>50</sup> If completed, the new pipeline would have an estimated annual capacity of 33 bcm, delivering 14 bcm of natural gas each to India and Pakistan and 5 bcm to Afghanistan annually.<sup>51</sup> Although the creation of the consortium was an important step forward, instability in Afghanistan halted practical realisation of the project.

The Taliban takeover of Afghanistan in 2021 seems to offer an opportunity for the renewal of the pipeline project, although it is unclear whether the new government would be able to ensure security along the entire 774-kilometer-long segment that would pass through Afghanistan. Animosities between India and Pakistan pose another major challenge to the project. Indian officials have repeatedly expressed suspicion towards it and declared that their country is not ready to make itself dependent on a resource supply from Pakistan. However, the pipeline could also be a way to bridge relations between the two countries by offering a mutually beneficial commercial connection. Russia's role here might prove significant. Russia is a major diplomatic partner of both India and Pakistan. Given the pipeline's potential to transport Russian gas to Pakistan and India, Russia could assure both of the reliability of its supplies. The project would also be an avenue for negotiations with Taliban.

Both Russia and China have expressed their interest in facilitating a stable and developing Afghanistan. Providing Afghanistan with a reliable source of revenue, in a form of transit fees, offers a way to help achieve this objective. In June 2023, Turkmenistan and Pakistan signed new Joint Implementation Plan to accelerate work on the TAPI, and the Afghan Taliban leaders "have promised to raise a dedicated force for the security of the pipeline."<sup>52</sup>

The major alternative to TAPI, one that avoids security concerns around Afghanistan might be the Iran-Pakistan-India (IPI) gas pipeline, also known as the "Peace Pipeline." The idea emerged as early as 1989 and, as with TAPI, an initial agreement was signed in 1995. Like TAPI, the project has suffered from various delays (mainly on the Pakistani side) and India's unwillingness to rely on Pakistan as a transit country. 53 Moreover, unlike TAPI, this project never enjoyed support from the US. Washington was opposed to Iran receiving a major source of revenue and point of connection with the strategically important region of South Asia. However, in 2017, following the relaxation of international sanctions on Iran under the JCPOA nuclear agreement, a report was submitted to the Indian Parliament by its Standing Committee on Petroleum and Natural Gas suggesting "The government should examine the idea of reviving the [IPI] project as international conditions have become favourable following lifting sanctions against Iran."<sup>54</sup> In 2017, Indian officials talked about withdrawing from the project in favour of an underwater alternative that would connect the country directly to Iran. The renewal of American sanctions on Iran in 2018 has, however, made implementation of the IPI project more challenging.

It is anticipated that TAPI would enter Pakistan from the northwest, near Quetta. The IPI would enter from the southwest through Balochistan. The proposed "Pakistan Stream" pipeline (also known as the "North—South Gas Pipeline"), announced in 2015, would have the ability both to accept LNG from the southern port of Karachi and transmit it (after regasification) to Lahore and also to connect with either (or both) TAPI or IPI. Construction was supposed to begin in 2021 but as of 2023 the parties are still in discussions. The initial plan was for Russia to build and operate the Pakistan Stream pipeline for its first 25 years and then transfer ownership to Pakistan. Later, it was reported that Pakistani Prime Minister Imran Khan re-negotiated the deal so that Pakistan would control 74% of the equity with the rest held by Russia. <sup>55</sup> In a January 2023 interview with the Pakistani newspaper *The Nation*, the Russian Minister of Energy Nikolay Shulginov confirmed plans to

connect the Pakistan Stream with the TAPI or IPI projects: "We are currently discussing the project both from the point of view of transporting regasified LNG and pipeline gas – from Iran or coming through TAPI." The changing geopolitical landscape makes these possibilities even more feasible now. However, Russia's chances of success are unclear.

Less than two months after the Trilateral Gas Union was proposed, the Russian state-owned gas producer Gazprom signed "roadmaps' with both Kazakhstan (18 January 2023) and Uzbekistan (24 January 2023). Their substance was not disclosed but it is likely that these were framework agreements stating the willingness of the parties to take part in the initiative, and to begin price negotiations and technical inspections of the Bukhara-Ural and Central Asia-Centre pipelines in order to assess their ability to efficiently transport natural gas in reverse mode. Inspections were completed in late April 2023 and the Uzbek Energy Minister reported that Bukhara-Ural pipeline is heavily aged, leaving the Central Asia-Centre pipeline as the route under consideration to transport Russian gas into Central Asia. <sup>57</sup> In June 2023, Kazakh Energy Minister declared that Kazakhstan's segment of the pipeline and surrounding infrastructure would be prepared to receive Russian gas by the winter of 2024.<sup>58</sup> The key idea behind these assessments is to determine how much investment is needed to revive and modernise the pipeline. When speculating about the future, there are three possible – but not mutually exclusive – scenarios for the future role of the Trilateral Gas Union that Russia might pursue. They range from "minimal" to "maximal, and also from easiest to most challenging to implement.

### 5.1. Scenario one: harmonisation of natural gas flows with Central Asia

This scenario has two variants. Firstly, it might allow the transportation of Central Asian gas to Europe via Russia's pipeline system in a manner similar to Kazakhstan's accomplishments with oil. In return, Russia would receive a transit fee, although it would be far less than the value of its lost European market. The potential volumes of Central Asian gas exports to Europe would be far smaller than those that Russia supplied before 2022. This hypothetical scenario would give Central Asian gas exporters a major market alternative to China and enable them to renegotiate the price on exported gas with the latter. However, such a scenario is highly unlikely to materialise for two reasons. Firstly, Central Asian countries have long-term contract obligations to export gas to China, and China has the right to inflict harsh penalties for breaking the contracts.

Given China's major economic influence in the region, it is hard to imagine that Central Asian countries would be willing to fully breach the contract. Providing the contracts to export gas to China remain intact, Central Asia would have no spare gas to redirect to Europe, especially given the growing energy deficits in the region. Secondly, it is unlikely that Russia would be willing to help Europe to solve its energy supply problems by allowing the transit of large volumes of Central Asian gas. In any case, the idea behind the Trilateral Gas Union is Russia's desire to use the Central Asia–Centre pipeline in reverse, not traditional mode.

A second variant of this "minimal" scenario might be for Russia to enter the Central Asian gas market and provide supplies to cover the region's winter shortages. Russia's most ambitious desired goal within this variant might be to gain control of the national gas transportation systems in Central Asia. According to some reports, this is an objective for which the Russian state-owned energy giant Gazprom previously, and unsuccessfully, lobbied.<sup>61</sup> Such a move would minimise political risks for Russia and maximise its profits. However, even partial Russian ownership or control of their national pipeline systems is a sensitive issue for Central Asian governments. Despite this, they might fear that not allowing such an arrangement could result in disputes between transit countries and Russia over transit fees. Such escalating price negotiations could, in turn, trigger a chain reaction of security issues similar to those that laid in the foundations of the Ukraine crisis over the past 20 years. This might add on to the concerns of some<sup>62</sup> that Kazakhstan might become "a Second Ukraine".63

This second variant of the "minimal" scenario is much more likely than the first, since it follows the idea and logic of the Trilateral Gas Union. Moreover, we see evidence that the governments of both Kazakhstan and Uzbekistan have expressed their willingness to purchase gas from Russia via this route and already started to prepare their infrastructure for gas imports. In June 2023, Uzbekistan signed a contract to purchase 2.8 bcm/year of Russian gas to be imported via Central Asia-Centre pipeline in the reverse mode. According to the agreement, this gas supply will begin at the end of 2023. <sup>64</sup> Yet, if supplying natural gas to Central Asia is the limit of Russia's ambition and the Trilateral Gas Union remains confined within the borders of Central Asia, the likely future impact on Russian gas exports would be small, a maximum of 5–7 bcm per year. As mentioned above, this is hardly an alternative to almost 167 bcm that were previously supplied annually to Europe.

## 5.2. Scenario two: linking the Trilateral Gas Union to Russia's natural gas supply to China

Russia, Kazakhstan, Turkmenistan, and Uzbekistan all supply natural gas to China and are thus competitors for its market. As we saw earlier, declining production and growing demand in Uzbekistan has left the country unable to supply enough natural gas to its own citizens during winter peaks. To solve its domestic shortages, Uzbekistan signed a deal with Turkmenistan and started to import gas from this country. Turkmenistan, however, proved to be unreliable supplier. In the middle of the 2022/23 winter, it stopped supplying natural gas to Uzbekistan due to "the formation of hydrate in the infield pipelines."65 Due to this emergency, Uzbek officials had to announce a halt to all natural gas exports including, for a while, to China (interestingly, this reported suspension was not supported by official Chinese statistics). 66 This crisis made it easier for the Uzbek government to persuade its citizens that the country needs to obtain alternative supplies of natural gas from Russia. Sanzhar Zharkeshov, the Chairman of the Management Board at OazagGaz (the National Gas Company of Kazakhstan) declared that Kazakhstan will face a deficit of consumable (refined) natural gas in 2024, 67 while some analysts predict that Kazakhstan will soon repeat the fate of Uzbekistan and be "short of gas" in the 2020s. 68 Northern Kazakhstan, due to the heritage of the common Soviet energy system, is already dependent on natural gas supply from Russia. Turkmenistan, although the largest Central Asian gas exporter, is currently experiencing major issues with financial stability. Iran owes the country several billion dollars for previous gas contracts, and, at the same time, China is suing Turkmenistan for not supplying specified amounts of gas as prescribed by their bilateral contract.<sup>6</sup>

China's priority is to ensure a stable energy supply to support its ongoing economic development. In 2021, according to the BP Statistical Review of World Energy, China "surpassed Japan as the world's largest LNG importer and accounted for close to 60% of global LNG demand growth." In 2021 it received some 40% of its gas imports from Australia, and another 33% from the US, Qatar, and Malaysia. It remains vulnerable to sudden increases in price if, for example, a severe winter in Europe pushes up demand for gas. Moreover, some kind of confrontation between the US and China might, conceivably, reduce China's access to maritime supply routes. For the leadership in Beijing, a logical mitigation for such scenarios would be to ensure that China has capacious energy supply routes that cannot be easily interrupted. At present, three pipelines from Central Asia have the theoretical capacity to supply China with 55

bcm of natural gas annually. In reality, however, the pipelines rarely operate at their maximums. Turkmenistan supplies up to 31 bcm annually and Uzbekistan about 4–6 bcm, at best. A fourth line, currently under construction is projected to increase total capacity to 85 bcm per annum. Which country's gas could fill the 30 bcm rise in discharge capacity if even existing capacity is not fully covered by Central Asian exporters?

In 2019, Russia completed its "Power of Siberia" pipeline to China with a capacity of 61 bcm per year. More than a third of this goes to supply Russia's Far East, however. In 2021, Russia supplied just 10 bcm to China. In 2023, the pipeline reached its full planned export capacity of 38 bcm, making Russia the third largest gas supplier to China. In December of 2022, President Putin announced that Russia is "to boost its gas sales to China to 48 bcm annually by 2025 and to 88 bcm by 2030," this alone would cover 60% of what Russia previously supplied to Europe. On March 21 of 2023, during Xi Jinping's visit to Russia, President Putin declared a commitment to increase the volume of natural gas supply from Russia to China to 98 bcm plus 100 million tons of LNG (the equivalent of 138 bcm of pipeline gas) annually by 2030. It is difficult to imagine how this could be accomplished in such a short period of time without involving extra energy routes.

The construction of the Second Phase (from Irkutsk Oblast) and Third Phase (from Sakhalin) of the Power of Siberia is planned to commence in 2024 and will take several years. In the meantime, it is possible that Central Asian routes might be used by Russia to increase its gas supply to China, either physically or via swap agreements. As we saw above, Central Asian countries are currently unable to fill the existing three pipelines to China to their full capacity, let alone the fourth line currently under construction. In this context, creating a gas union, or even a simple mechanism for coordinating energy flows, might allow Russia to compensate for domestic gas shortages in Central Asian republics and thereby stabilise the socio-economic situations in these countries. At the same time, it would allow Central Asian countries to redirect freed gas to ensure contract obligations to China and earn more foreign currency revenue than they otherwise could. It would also help Russia achieve its extremely ambitious plans to expand gas exports to China and provide Central Asian countries with additional revenue in the form of Russian transit fees.

Some experts estimate that Gazprom would be able to supply up to 20–25 bcm of natural gas to China annually via Central Asia and that first gas

exports could be launched by the end of 2023: up to 10 bcm (4-6 bcm of which would go to China). <sup>78</sup> The exact arrangement by which Russia's natural gas might be supplied to Central Asia or to China via Central Asia has not yet been determined. Some local sources have claimed that Russia agreed to supply Central Asia with gas in exchange for obtaining control over the national pipeline systems of Kazakhstan and Uzbekistan. 79 If this were the case, Gazprom would become party to the gas export agreement with China, instead of Central Asian providers. This move would maximise Russia's profits and minimise political risks, especially since it would eliminate the "middleman problem" that Russia experienced for decades when supplying oil and gas to Europe via pipelines passing through Ukraine. However, local officials were quick to claim that they would not transfer any rights to Russia that would allow it to control their national energy systems. 80 Such a decision might create a new kind of security concern between the Central Asian states and Russia over the terms of gas transit and associated fees. Yet, such a "Ukraine scenario" is not predestined and, even without acquisition of ownership rights over the Central Asian pipeline system, Russia would be able to export natural gas to China and beyond.

#### 5.3. Scenario three: a new export route to South Asia

In the past, and mainly for geopolitical reasons, India has been unable to directly connect to the energy-abundant regions of the Middle East and Northern Eurasia. However, current changes in global geopolitics are opening new opportunities and might allow for the formation of regional agreements and increased resilience from external pressures. On 26 December 2022, Russian Deputy Prime Minister and former Minister of Energy Alexander Novak summarised the options in an interview with the TASS news agency: "If we talk about perspective, this includes exports of gas to Afghanistan, Pakistan – either using the infrastructure projects of Central Asia or through a swap from the territory of Iran." If Russia intends to create a grand infrastructure and supply its gas to Iran, Afghanistan, and Pakistan, there is another tempting prize in the region: the even more lucrative market of India. There appear to be four possible (and not mutually exclusive) options through which this might unfold:

1) **TAPI:** total project discharge could be 33 bcm annually. 82 If the Trilateral Gas Union endures, Russian gas could be supplied to Turkmenistan via the old Soviet pipeline Central Asia—Centre (capacity 50 bcm) in reverse mode. When the gas reaches Turkmenistan, it could be mixed with Turkmen gas to avoid potential sanctions from the

US and the EU for buyers of the Russian gas (an idea similar to the Turkey gas hub). <sup>83</sup> This network could be connected to the proposed TAPI pipeline, something that looks more feasible with the prospect of financial and technical support from Russia and political support from the Chinese government interested in a stable Afghanistan. <sup>84</sup> This would reduce concerns about the ability of Turkmenistan to supply enough gas to meet demand in both China and South Asia. The pipeline would go through two major cities in Afghanistan (Herat and Kandahar) and may provide the Taliban government with a stable source of revenue. Major concerns over the ability of the new Afghan authorities to ensure security of the pipeline would, however, endure.

Turkmenistan, with its massive gas reserves and strategic geographical location, would be at the centre of this initiative. It was no accident that Russia–Turkmenistan relations intensified in 2022, demonstrated by unusually frequent negotiations between leaders and officials from the two countries and the organisation of joint business and economic events. In March 2022, President Gurbanguly Berdimuhamedow called Vladimir Putin and, in June, his son, the newly elected President Serdar Berdimuhamedow conducted his first state visit to Moscow. This was well before the Trilateral Gas Union project was announced to the public. Phone calls between presidents and prime ministers and joint events, including a business forum which featured signing of economic investment project worth two billion USD followed. All of this is highly unusual for autarkic and isolationist neutral Turkmenistan, which has, since independence, distanced itself from all major foreign actors.

2) **Uzbekistan-Afghanistan-Pakistan:** an alternative new gas pipeline route might go through the Uzbek city of Termez and then Kabul perhaps in parallel with the newly contracted Trans-Afghan Railway Line: "Termez – Mazar-i-Sharif – Kabul – Peshawar". The length of the Afghan sector would be half that of TAPI. This new natural gas pipeline would involve only two Central Asian countries: Kazakhstan and Uzbekistan (both being members of the Trilateral Gas Union), with which Russia currently has close relations. It would also avoid unreliable Turkmenistan, which is a major competitor for both the Chinese and (potential) South Asian markets. Both this potential project and TAPI might, in turn, be connected to the Pakistan Stream system, which Russia started to develop back in 2015, and then – potentially – to India. This route has never been publicly

proposed by any party, but it has the advantages of being shorter and avoiding competition with Turkmenistan. It would allow Uzbekistan to become a hub for Central Asian energy and could enable Russian gas to be blended with Uzbek to avoid potential sanctions. If Turkmenistan and Russia could not come to an agreement (on how to divide the Chinese gas market and over possible transit fees), this option might become the only possibility to transport Russian gas to South Asia via Central Asia.

Alternative options to the two mentioned above would involve Iran, which has been subject to international sanctions for many years now. However, other factors may make the routes more feasible than often thought. India and Pakistan now experience major energy deficits and still make massive use of coal. With Russian support, they may be more willing to challenge the restrictions on trading with Iran. Providing them with a major source of natural gas could change the entire energy market of the region.

- 3) **IPI:** projected annual capacity estimated to be 40–50 bcm. <sup>92</sup> This option is similar to TAPI but once the Russian gas reaches Turkmenistan it would be connected with the Iranian gas system and then through the IPI to Pakistan and India. At one point in time, a maritime pipeline that would directly link Iran with India, avoiding Pakistan, was also considered by those two countries. In the past, the US government pressured both India and Pakistan<sup>93</sup> to reject all such deals with Iran. Any successful pipeline project would make Iran a major regional energy hub, bringing it massive revenue, and simultaneously render LNG supplies to India (from the US among other countries) less competitive. Iran has constructed its segment of the IPI pipeline and it is reported that Tehran intends to charge Pakistan an \$18 billion penalty for not completing its segment on time. 94 In light of their abovementioned energy shortages, both India and Pakistan may become more willing to resist pressure from the United States, and might seriously consider receiving natural gas from Iran.
- 4) Azerbaijan-Iran: finally, Russia could avoid Central Asia entirely by supplying gas through Azerbaijan. The region inherited the (Soviet era) Hajiqabul-Astara-Abadan pipeline that originally supplied Iranian gas to the Soviet Union. Under a 2006 agreement, Azerbaijan used the pipeline in reverse mode as part of a swap deal with Iran. In 2022, Azerbaijan started importing Russian gas through the old pipeline system and in September 2022, Iran signed a \$40 billion deal with

Russia to import gas via Azerbaijan. <sup>95</sup> In the past few years, Iran has heavily invested in expanding the capacity of its northern pipeline systems and plans to finish another pipeline this year. This route is almost complete, although it still faces several challenges, notably the tense relations between Azerbaijan and Iran. It will also encounter the same difficulties as the IPI project: the reluctance of Pakistan to finish its segment of the pipeline to enable transit of gas to India.

Apart from the geopolitical pressures and threats of sanctions, there are two other major obstacles to the realisation of these projects. The first relates to concerns over security of the pipelines, especially those segments transiting Afghanistan and the Baluchistan region of Iran and Balochistan in Pakistan. The second is the financial ability of Iran and Turkmenistan to make the necessary investments in new energy infrastructure. <sup>96</sup> If Russia were to participate, however, finance would no longer be an obstacle.

Animosities between India and Pakistan are often named as another major obstacle blocking the realisation of pipeline projects connecting the two countries, despite potential economic benefits that appear "evident" according to some scholars. <sup>97</sup> It is possible, however, that such an initiative could also be a potential "bridge of friendship". Even during the Cold War, stability rested on such "pipelines of friendship" (the main Soviet pipeline to West Germany was named "Druzhba" or "Friendship"). If such infrastructural projects between the USSR and Western Europe became possible in the midst of the Cold War, it would be unwise to completely rule out the possibility of constructing the TAPI and/or IPI pipelines in the future. Moreover, China, Russia, Kazakhstan, Uzbekistan, Iran, Pakistan, and India are all now members of the Shanghai Cooperation Organisation, which aims at "strengthening mutual confidence and good-neighbourly relations among the member countries; promoting effective cooperation in politics, trade and economy."

#### 6. Conclusion: changing the chessboard?

India is already a major importer of Russian goods, from wheat to weapons. Receiving energy resources from Russia would not be unusual for the country. Since the beginning of the full-fledged war in Ukraine in 2022 and the associated western sanctions imposed on Russia, India and some other Asian countries have substantially increased their imports of Russian crude oil, sometimes re-selling it to Western

countries.<sup>99</sup> In June 2023, one estimate suggested oil exports from Russia to India had increased 19 times and amounted to 41 million tons in 2022. 100 According to the Indian co-founder of the Global Trade Research Initiative (GTRI), "Russia's share in India's import of petroleum crude jumped from 6.4 per cent in January-June 2022–31.3 per cent in January-June 2023." Given how much oil India imports, this is a gigantic leap. Both China and India have significantly increased their exports of diesel and jet fuel to the UK and the European Union, which was enabled by increased imports of Russian crude to Asia. 102 When the Indian Minister of Foreign Affairs Subrahmanyam Jaishankar was asked why India was willing to do the opposite of European states wanted, he replied: "I have a population [with a per capita income] of \$2,000. I also need energy, and I am not in a position to pay high prices for oil". 103 He noted that during the nine-month period following the start of the Ukraine War on 24 February 2022, the EU imported "more fossil fuel from Russia than the next ten countries combined ... and I would very respectfully suggest maybe EU is actually doing something very more than India is doing at this point of time." <sup>104</sup> So far most commentators have focused on China when analysing Russian attempts to diversify its energy resource exports. However, if India were to maintain its willingness to import Russian hydrocarbons, the possibility of a new major energy route to Pakistan and India, which Russia has evidently been working on at least since 2015, would change the entire energy balance of the continent.

In his 1997 book *The Grand Chessboard* and subsequent articles, former US National Security Adviser Zbigniew Brzezinski asserted that Eurasia is "the chessboard on which the struggle for global primacy continues to be played", adding that what "happens with the distribution of power on the Eurasian landmass will be of decisive importance to America's global primacy and historical legacy". 105 On this chessboard, according to Brzezinski, Central Asia has a unique role. In this respect, the realisation of Russian ambitions to penetrate the energy markets of China and India via Central Asia creates new opportunities for Eurasia, which might cause a grave threat to American dominance. President Putin has claimed that countries of the region are interested in coordinating their efforts to build new energy routes and transport infrastructure. 106 Energy routes, such as pipelines, are often accompanied by railways, highways and other logistical infrastructure. While the Central Asia - China pipeline could be seen as part of Beijing's Belt and Road Initiative, the Central Asia-Centre pipeline could become the crux of a new North-South corridor. India is the third-largest economy and most populous country in the

world, while Russia is the world's fifth-largest economy<sup>107</sup> and consistently one of its largest oil and gas exporters. The game-changing potential of a direct connection between South Asia and North Eurasia by reliable transport routes is enormous.

This is not the first attempt by Russia to build a direct trading connection with India. In the early eighteenth century, Emperor Peter the Great, who is famous for opening Russia's "window to Europe", also dreamed of reliable routes directly connecting Russia with India. He organised his empire's first sea expedition to India with a plan to establish an outpost in Madagascar to ensure trade between the two countries. The expedition (1723-1724) failed within a few months without even reaching Madagascar. In 1801, Peter's great-grandson worked with Napoleon to craft a joint military expedition against Britain, traversing Central Asia to reach India from the north. The hastily drafted plan did not include a reliable map of territories beyond the Amu Darya River. The so-called Indian March of Paul reached just half the distance to India before the troops heard news of the emperor's assassination and turned around. These failures only amplified Russia's efforts to gain control over the logistical corridors leading to India. However, even after the conquest of Central Asia and South Caucasus in the course of the Great Game, Russia was not able to arrange direct trade routes to India. Great Britain and Russia agreed that the Wakhan Corridor would be added to Afghanistan, and this narrow strip of land served as a buffer between the two empires.

In sum, the Trilateral Gas Union is more than a tactical move intended to compensate for Russia's sharply reduced energy exports to Europe amid the Ukraine War. It may very well be part of Russia's long-standing ambition to "open up the window" to India. This new attempt would surely be accompanied by enormous challenges, and it is far from clear whether the most ambitious scenarios outlined above can be fully realised anytime soon. Yet, establishing an energy corridor – and, subsequently, the infrastructure for transportation and communication – from Russia to South Asia via Central Asia or Azerbaijan and Iran could bring enormous benefits to all of the countries involved. Given the sheer size of the economies and populations of the South Asian region (home to a quarter of the world's population), the Trilateral Gas Union may mark the start of a process that could eventually transform the Eurasian chessboard and the global energy market in much the same way that the creation of OPEC did over six decades ago. At the very least, the east-west and north-south corridors together have the potential for becoming the crux of the future more integrated "greater Eurasia".

#### Disclosure statement

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#### **NOTES**

- Office of the President of Russia, 'Russian-Kazakhstani talks. The Kremlin hosted talks between the President of Russia and President of Kazakhstan Kassym-Jomart Tokayev'. The Kremlin, November 28, 2022, http://en.kremlin.ru/events/ president/transcripts/69944/print (accessed 11 April 2023).
- M. Episkopos, 'Energy War: Russia Floats Central Asian 'Gas Union'. The National Interest, November 30, 2022, https://nationalinterest.org/blog/buzz/energy-warrussia-floats-central-asian-'gas-union'-205971 (accessed 11 April 2023).
- E. Teslova, 'Coordination mechanism could be 1st step toward Kazakh-Uzbek-Russian 'gas union,' says Moscow'. Anadolu Agency, November 29, 2022, https://www.aa.com.tr/en/politics/coordination-mechanism-could-be-1st-steptoward-kazakh-uzbek-russian-gas-union-says-moscow/2751204# (accessed 11 April 2023).
- 4. D. Mosolkina, I. Laksygal and A. Vergazova. 'Uzbekistan Poka Ne Khochet Idti Na Chrezmernoye Sblizheniye s Rossiey', Vedomosti, December 8, 2022. https://www.vedomosti.ru/politics/articles/2022/12/08/954350-pochemu-uzbekistan-gazovii-soyuz (accessed 11 April 2023). T. Umarov, 'Is Putin About to Get His Gas Union with Kazakhstan and Uzbekistan?'. Carnegie Endowment for International Peace, March 13, 2023, https://carnegieendowment.org/politika/89256 (accessed 11 May 2023).
- 'Uzbekistan Rejects Putin-Proposed 'Trilateral Natural Gas Union'. Radio Free Europe/Radio Liberty, December 8, 2022, https://www.rferl.org/a/uzbekistanrejects-gas-union-russia-kazakhstan/32167559.html (accessed 11 April 2023).
- 'Ideyu sozdaniya gazovogo soyuza prokommentirovali v MID'. Tengri News, December 21, 2022, https://tengrinews.kz/kazakhstan\_news/ideyu-sozdaniya-gazovogo-soyuza-prokommentirovali-v-mid-486607/ (accessed 11 April 2023).
- S.N. Burna-Asefi, 'Uzbekistan-Russia Energy Relations: A Tale of 2 Problems'. The Diplomat, May 9, 2023, https://thediplomat.com/2023/05/uzbekistan-russia-energy-relations-a-tale-of-2-problems/ (accessed 30 June 2023).
- 8. 'Postavshchiki Gaza Otkazalis' ot Al'yansa'. *Kommersant*, July 4, 2002, https://www.kommersant.ru/doc/329450 (accessed 30 June 2023).
- CEIC Data, 'Uzbekistan Natural Gas Production: OPEC: Marketed Production 1990-2022'. CEIC Data, https://www.ceicdata.com/en/indicator/uzbekistan/naturalgas-production-opec-marketed-production (accessed 8 June 2023).

- 10. For example, the local sources suggest that "in order to meet the growing demand from both the population and the economy as a whole, by 2030 it will be necessary to increase the energy capacity by at least 1.7 times relative to the current level [2023]." 'Demand of Uzbek citizens for electricity may grow annually by 5-5.3% until 2035'. *KUN.uz*, February 1, 2023, https://kun.uz/en/news/2023/02/01/demand-of-uzbek-citizens-for-electricity-may-grow-annually-by-5-53-until-2035 (accessed 11 April 2023). International Energy Agency also predicts the same: "With GDP and population growth, the country's electricity demand is bound to increase." International Energy Agency, 'Sustainable development. Uzbekistan Energy Profile'. https://www.iea.org/reports/uzbekistan-energy-profile/sustainable-development (accessed 11 June 2023). See also J. Lillis, 'Fueling energy woes, Uzbekistan sees drop in gas output'. *Eurasianet*, February 22, 2023, https://eurasianet.org/fueling-energy-woes-uzbekistan-sees-drop-ingas-output (accessed 11 June 2023).
- 11. 'Subsidizing energy: Why is Uzbekistan keen on keeping the policy the richest countries could not afford?'. *KUN.Uz*, January 22, 2022, https://kun.uz/en/news/2022/01/22/subsidizing-energy-why-is-uzbekistan-keen-on-keeping-the-policy-the-richest-countries-could-not-afford (accessed 11 April 2023).
- 'Power blackout hits Kazakhstan, Kyrgyzstan and Uzbekistan'. Reuters, January 25, 2022, https://www.reuters.com/world/asia-pacific/power-blackout-hits-kazakhs tan-kyrgyzstan-uzbekistan-2022-01-25/ (accessed 11 April 2023).
- A. Sochnev, 'Kazakhstan: Public anger grows after plant crash leaves thousands freezing'. Eurasianet, December 1, 2022, https://eurasianet.org/kazakhstanpublic-anger-grows-after-plant-crash-leaves-thousands-freezing (accessed 11 April 2023).
- 14. 'Uzbekistan suspends natural gas exports to cope with winter deficits'. *Eurasianet*, November 16, 2022, https://eurasianet.org/uzbekistan-suspends-natural-gas-exports-to-cope-with-winter-deficits (accessed 11 April 2023).
- 15. 'Vlasti Dushanbe ob'yasnili problemu s otopleniem, elektrichestvom i vodosnabzheniem'. *Asia-Plus media group*, January 17, 2022, https://asiaplustj.info/ru/news/tajikistan/society/20230117/vlasti-dushanbe-obyasnili-problemu-s-otopleniem-elekt richestvom-i-vodosnabzheniem?tg\_rhash=dad9b8f651f186 (accessed 11 April 2023).
- 'Tokaev poruchil perenapravit' 2 mlrd kubometrov gaza s eksportnogo na vnutrenniy rynok'. Forbes Kazakhstan, June 9, 2022, https://forbes.kz/process/energetics/tokaev\_poruchil\_perenapravit\_2\_mlrd\_kubometrov\_gaza\_na\_vnutrenniy\_ryinok/(accessed 11 April 2023).
- 17. O. Auyezov, 'Kazakhstan to halt gas exports next winter, Ifax reports'. *Reuters*, February 27, 2023, https://www.reuters.com/business/energy/kazakhstan-halt-gas-exports-next-winter-ifax-reports-2023-02-27/ (accessed 11 April 2023).
- 18. 'QazaqGaz: Kazakstan mozhet ostanovit' eksport gaza v 2023 godu'. *Neft i Kapital*, June 6, 2022, https://oilcapital.ru/news/2022-06-06/qazaqgaz-kazahstan-mozhet-ostanovit-eksport-gaza-v-2023-godu-1047069 (accessed 11 April 2023).
- 19. S. Pirani, 'Central Asian Gas: prospects for the 2020s'. *The Oxford Institute For Energy Studies*, December 2019, www.oxfordenergy.org/wpcms/wp-content/uploads/2019/12/Central-Asian-Gas-NG-155.pdf (accessed 11 April 2023).

- CEIC Data, 'Uzbekistan Natural Gas Production: OPEC: Marketed Production'. CEIC Data, https://www.ceicdata.com/en/indicator/uzbekistan/natural-gas-production-opec-marketed-production (accessed 11 April 2023).
- 21. Office of the President of the Republic of Uzbekistan, 'Obsuzhdeny Zadachi Po Razvitiyu Elektroenergetiki v 2020 Godu'. *Prezident respubliki Uzbekistan*, January 13, 2020, https://president.uz/ru/3273 (accessed 11 April 2023).
- 22. Pirani, op. cit.
- 23. M. Fulwood and J. Sharples, 'Quarterly Gas Review: Impact of Conflict in Ukraine and the Short-Term Gas Markets'. The Oxford Institute For Energy Studies, February 2022, https://a9w7k6q9.stackpathcdn.com/wpcms/wp-content/uploads/2022/02/Gas-Quarterly-Review-Issue-16.pdf (accessed 11 April 2023). 'Trends in Global & European Gas Market The Role of LNG'. Council of European Energy Regulators, September 6, 2011, www.ceer.eu/documents/104400/-/-/0ffafd46-4b46-2940-98ab-0574109c12cc (accessed 11 April 2023).
- S. Kardaś, 'Conscious uncoupling: Europeans' Russian gas challenge in 2023'.
   European Council On Foreign Relations, February 13, 2023, https://ecfr.eu/article/conscious-uncoupling-europeans-russian-gas-challenge-in-2023/ (accessed 11 April 2023).
- C. Jordan and S. Husbands, 'Europe's Not Buying: The Impact of Lost Gas Markets for Gazprom and Russia'. *The Royal United Services Institute*, May 5, 2023. https:// rusi.org/explore-our-research/publications/commentary/europes-not-buyingimpact-lost-gas-markets-gazprom-and-russia (accessed 11 April 2023).
- International Energy Agency, 'Frequently Asked Questions on Energy Security'. November 16, 2022, https://www.iea.org/articles/frequently-asked-questions-on-energy-security (accessed 11 April 2023).
- M. Strokan and N. Mukhammadkulova, 'A Trilateral Gas Union: Risks and Benefits for Central Asia'. *The Diplomat*, January 20, 2023, https://thediplomat. com/2023/01/a-trilateral-gas-union-risks-and-benefits-for-central-asia/ (accessed 11 April 2023).
- 28. H. Brands, 'The Battle for Eurasia China, Russia, and their autocratic friends are leading another epic clash over the world's largest landmass'. Foreign Policy, June 4, 2023, https://foreignpolicy.com/2023/06/04/russia-china-us-geopolitics-eurasia-strategy/ (accessed 10 July 2023) and also A. Ramzy, 'China Touts Its Diplomatic Strength in Russia's Backyard'. The Wall Street Journal, May 19, 2023, https://www.wsj.com/articles/china-touts-its-diplomatic-strength-in-russias-backyard-bc7 457d1 (accessed 10 July 2023).
- 29. "The war in Ukraine and the deepening rift between China and the United States have brought Moscow and Beijing closer together. That interdependence extends to their relations in Central Asia .... In matters of regional security, too, Chinese and Russian interests and influence often complement each other. The top priority for both sides is to keep Central Asia's current regimes in place and to keep the West —and above all, the United States—out." T. Umarov and A. Gabuev, 'Is Russia Losing Its Grip on Central Asia?'. Foreign Affairs, June 30, 2023, https://www.foreignaffairs.com/china/russia-losing-its-grip-central-asia (accessed 10 July 2023).
- 30. Ibid.

- 31. 'Kak Kitay Obgonyaet Rossiyu v Torgovle V Tsentralnoy Azii'. *RBK Media Group*, May 28, 2023, https://www.rbc.ru/economics/28/05/2023/646e43449a7947 15028aa655 (accessed 10 July 2023).
- 'Infografika: Vneshnyaya Torgovlya Uzbekistana Za 2022 God'. Review.Uz, January 24, 2023, https://review.uz/post/infografika-vneshnyaya-torgovlyauzbekistana-za-yanvar-dekabr-2022-goda (accessed 11 April 2023).
- 33. Eurasian Development Bank, 'EDB monitoring: foreign direct investments between CIS countries and China, Iran, Arab states exceed US \$75 billion'. December 20, 2022, https://eabr.org/en/press/news/edb-monitoring-foreign-direct-investments-between-cis-countries-and-china-iran-arab-states-exceed-us/ (accessed 11 April 2023).
- C. Putz, 'Central Asian Presidents Join Putin for May 9 Victory Day Parade'.
   The Diplomat, May 10, 2023, https://thediplomat.com/2023/05/central-asian-presidents-join-putin-for-may-9-victory-day-parade/ (accessed 10 July 2023).
- 35. Umarov and Gabuev, op. cit.
- S. Lavrov, 'Rossiya Tsentral'naya Aziya. 30 Let Na Puti Druzhby i Sotrudnichestva'. Rossiyskaya Gazeta, May 5, 2020, https://rg.ru/2022/05/05/sergejlavrov-rossiia-centralnaia-aziia-30-let-na-puti-druzhby-i-sotrudnichestva.html (accessed 11 April 2023).
- 37. Episkopos, op. cit.
- 38. A. Syed, 'China's Population Has Shrunk. India Might Now Be the World's Most Populous Country'. *Time*, January 17, 2023, https://time.com/6247720/indiamost-populous-country-china/ (accessed 11 April 2023).
- 'Natural Gas A Fuel of First Choice'. J.M. Baxi Group Tidings Issue XX (January-March 2018), https://www.jmbaxi.com/newsletter/issue-xx/natural-gas-a-fuel-of-first-choice.html (accessed 11 April 2023).
- Statista, 'Distribution of liquefied natural gas imported into India in 2021, by country of origin'. November 2022, https://www.statista.com/statistics/ 1237488/lng-import-share-india-by-country/ (accessed 11 April 2023).
- 'IEA sees India's imports of natural gas, oil zoom by 2030'. The Economic Time, October 28, 2022, https://economictimes.indiatimes.com/industry/energy/oil-gas/iea-sees-indias-imports-of-natural-gas-oil-zoom-by-2030/articleshow/95130 631.cms?from=mdr (accessed 11 April 2023).
- 42. S. Tani, 'Europe and Asia intensify battle to secure gas supplies'. Financial Times, August 5, 2022, https://www.ft.com/content/93c6570b-10f9-46cf-8310-2caa319c00a3 (accessed 11 April 2023).
- 43. 'India, Pakistan left in a lurch as gas deliveries get redirected to Europe'. *Business Standard*, August 19, 2022, https://www.business-standard.com/article/economy-policy/india-pakistan-left-in-a-lurch-as-gas-deliveries-get-redirected-to-europe-122081900134\_1.html (accessed 11 April 2023).
- T. Paraskova, 'High LNG Prices Have Sparked Demand Destruction In India'. Oil Price, November 10, 2022, https://oilprice.com/Energy/Energy-General/High-LNG-Prices-Have-Sparked-Demand-Destruction-In-India.html (accessed 11 April 2023).

- 45. H. Zaremba, 'Europe's Energy Crisis Leaves Almost All Of Pakistan Without Power'. *Oil Price*, January 25, 2023, https://oilprice.com/Energy/Energy-General/Europes-Energy-Crisis-Leaves-Almost-All-Of-Pakistan-Without-Power. html (accessed 11 April 2023).
- 46. S. Malik, M. Qasim, H. Saeed, Y. Chang and F. Taghizadeh-Hesary, 'Energy Security in Pakistan:a Quantative Approach to a Sustainable Energy Policy'. Asian Development Bank Institute, ADBI Working Paper 1024, 2019, https://www.adb.org/sites/default/files/publication/535821/adbi-wp1024.pdf (accessed 11 April 2023).
- 47. V. Ratcliffe, 'Pakistan's dependence on natural gas is turning into a nightmare'. *Al Jazeera*, September 28, 2021, https://www.aljazeera.com/economy/2021/9/28/pakistans-dependence-on-natural-gas-is-turning-into-a-nightmare (accessed 11 April 2023).
- 48. C. Kennedy, 'Pakistan 'Has No Option but To Ration' Natural Gas Supply This Winter'. *Oil Price*, November 11, 2022, https://oilprice.com/Energy/Natural-Gas/Pakistan-Has-No-Option-But-To-Ration-Natural-Gas-Supply-This-Winter.html (accessed 11 April 2023).
- Asian Development Bank, 'TAPI Shareholders Agreement Signed at Groundbreaking Ceremony'. December 15, 2015, https://www.adb.org/news/tapishareholders-agreement-signed-groundbreaking-ceremony (accessed 6 June 2023).
- 50. Asian Development Bank, 'TAPI Gas Pipeline'. April 8, 2016, https://www.adb.org/news/infographics/tapi-gas-pipeline (accessed 6 June 2023).
- 51. Asian Development Bank, 'TAPI Shareholders Agreement Initiated'. October 26, 2015, https://www.adb.org/news/tapi-shareholders-agreement-initialed (accessed 6 June 2023).
- 52. 'Pakistan, Turkmenistan sign joint implementation plan to execute TAPI gas pipeline project'. *Energyworld*, June 8, 2023, https://energy.economictimes.indiatimes.com/news/oil-and-gas/pakistan-turkmenistan-sign-joint-implementation-plan-to-execute-tapi-gas-pipeline-project/100850954 (accessed 11 July 2023).
- 'Iran threatens to impose \$18 billion penalty on Pakistan: Here is why'. OpIndia, February 2, 2023, https://www.opindia.com/2023/02/iran-pakistan-gas-pipeline-project-delay-penalty/ (accessed 11 April 2023).
- 54. 'India should revive Iran-Pakistan-India gas pipeline: Parliamentary Panel'. *The Economic Times*, March 19, 2017, https://economictimes.indiatimes.com/industry/energy/oil-gas/india-should-revive-ipi-pipeline-parliamentary-panel/articleshow/57716034.cms (accessed 11 April 2023).
- 55. 'Pakistan, Russia Sign Agreement on Stream Gas Pipeline'. *Egypt Oil & Gas*, May 31, 2021, https://egyptoil-gas.com/news/pakistan-russia-sign-agreement-on-stream-gas-pipeline/ (accessed 11 April 2023).
- F. Yousafzai, 'No Obstacle in purchase of Russian oil, says Nikolay Shulginov'. *The Nation*, January 18, 2023, https://www.nation.com.pk/18-Jan-2023/no-obstacle-in-purchase-of-russian-oil-says-nikolay-shulginov (accessed 11 April 2023).
- 57. 'Dlya Postavok Gaza Iz Rossii v Uzbekistan Rassmatrivaetsya Gazoprovod Srednyaya Aziya Tsentr'. *Gazeta.uz*, April 28, 2023, https://www.gazeta.uz/ru/2023/04/28/gas-rus-uzb/ (accessed 11 June 2023).

- 58. 'Stalo Izvestno, Kogda Infrastruktura Kazakstana Budet Gotova Dlya Tranzita Gaza Iz RF v Uzbekistan'. *KUN.uz*, June 2, 2023, https://kun.uz/ru/news/2023/06/02/stalo-izvestno-kogda-infrastruktura-kazaxstana-budet-gotova-dlya-tranzita-gaza-iz-rf-v-uzbekistan (accessed 11 June 2023).
- 59. Since late February 2023, Kazakhstan has been able to transport some oil through Russia's Druzhba pipeline to Central Europe. M. Strokan, 'Kazakhstan's Druzhba Prospects: Central Asian Oil to Supply Europe?'. *The Diplomat*, April 28, 2023, https://thediplomat.com/2023/04/kazakhstans-druzhba-prospects-central-asian-oil-to-supply-europe/ (accessed 28 April 2023).
- 60. A. Pandey, 'Germany: How does its Kazakh oil deal benefit Russia?'. *Deutsche Welle*, January 3, 2023, https://www.dw.com/en/germany-how-does-its-kazakh-oil-deal-benefit-russia/a-64849621 (accessed 11 April 2023).
- 61. 'Nikakih Ugroz Peredachi Komu-Libo Gazotransportnoy Sistemy net MinEnergo Uzbekistana'. *Gazeta.Uz*, January 25, 2023, https://www.gazeta.uz/ru/2023/01/25/gas-statement/ (accessed 11 April 2023).
- T. Umarov, 'After Ukraine, Is Kazakhstan Next in the Kremlin's Sights?'. Carnegie Endowment for International Peace, August 11, 2022, https://carnegieendowment. org/politika/87652 (accessed 11 April 2023).
- 63. P. Goble, 'Moscow Outraged That Kazakhstan Becoming 'a Second Ukraine'. *The Jamestown Foundation*, April 5, 2022, https://jamestown.org/program/moscowoutraged-that-kazakhstan-becoming-a-second-ukraine/ (accessed 11 April 2023).
- 64. 'Uzbekistan Zakliuchil Dogovor Na Pokupku Gaza Iz Rossii'. *RIA Novosti*, June 19, 2023, https://ria.ru/20230619/gaz-1879053823.html (accessed 11 July 2023).
- 65. 'Reason why Turkmenistan stopped gas supplies to Uzbekistan explained'. *KUN.Uz*, January 18, 2023, https://kun.uz/en/news/2023/01/18/reason-why-turkmenistan-stopped-gas-supplies-to-uzbekistan-explained (accessed 11 April 2023).
- 66. J. Lillis, 'As Uzbekistan freezes, is it exporting valuable gas to China or not?'. *Eurasianet*, January 24, 2023, https://eurasianet.org/as-uzbekistan-freezes-is-it-exporting-valuable-gas-to-china-or-not (accessed 11 April 2023).
- 67. 'Troystvennyi Gazovyi Soyuz Napugal Vashington'. *Neft' i Kapital*, January 18, 2023, https://oilcapital.ru/news/2022-12-16/gaz-bez-soyuza-2617680 (accessed 11 April 2023).
- 68. Pirani, op. cit.
- 69. 'Turkmenistan: Avtoritet Nizkiy, Monument Vysokiy'. *Eurasianet*, February 9, 2023, https://russian.eurasianet.org/туркменистан-авторитет-низкий-монумент-высокий (accessed 11 April 2023).
- 'Results from bp.com BP Statistical Review of World Energy 2022'. BP Statistical Review of World Energy, 71 edition, 2022, www.bp.com/content/dam/bp/businesssites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-statsreview-2022-full-report.pdf (accessed 11 June 2023).
- 71. E. Olander, 'Where Does China Source Its Natural Gas'. *China Global South Project*, August 24, 2022, https://chinaglobalsouth.com/2022/08/24/where-does-chinasource-its-natural-gas/ (accessed 11 April 2023).

- 72. 'The China-Central Asia natural gas pipeline supplied 43 bcm to China in 2022'. Enerdata, January 10, 2023, https://www.enerdata.net/publications/daily-energy-news/china-central-asia-natural-gas-pipeline-supplied-43-bcm-china-2022.html (accessed 11 April 2023).
- 73. 'Uzbekistan Ends Gas Exports to China, Abandons Price Increases at Home'. *Eurasianet*, January 10, 2022, https://eurasianet.org/uzbekistan-ends-gas-exports-to-china-abandons-price-increases-at-home (accessed 11 April 2023).
- 'The China-Central Asia natural gas pipeline supplied 43 bcm to China in 2022', op. cit.
- 75. V. Soldatkin, 'Putin plans more gas sales to China, e-platform for European prices'. *Reuters*, December 15, 2022, https://www.reuters.com/business/energy/putin-says-russia-increase-gas-sales-to-east-2022-12-15/ (accessed 11 April 2023).
- Assuming 1 million tonnes (LNG) = 1.379 bcm (gas), see for example B. Shiveli, 'Understanding Liquefied Natural Gas (LNG) Units'. *Enerdynamics*, https://www.enerdynamics.com/Energy-Currents\_Blog/Understanding-Liquefied-Natural-Gas-LNG-Units.aspx (accessed 11 April 2023).
- 77. 'Putin: Rossiyskiy Biznes v Sostoyanii Udovletvorit' Rastushchiy Spros Kitaya. Na Energonositeli'. *TASS*, March 21, 2023, https://tass.ru/ekonomika/17329023 (accessed 11 April 2023).
- 78. Tsentr Razvitiya Energetiki, 'Fevral'skiy Analiticheskiy otchet #10'. January-February 2023, https://entran.ru/otchjot-ob-jenergoperehode/fevralskij-10-otchjot-centra-rje-zhizn-pod-sankcijami/ (accessed 11 April 2023).
- 79. 'SMI: Rossiya Poprosila Uzbekistan Peredat' Gazotransportnuyu Sistemu «Gazpromu» i Peredat' Prava Po Eksportu Gaza v Kitay'. *KUN.Uz*, January 14, 2023, https://kun.uz/ru/news/2023/01/14/smi-rossiya-poprosila-uzbekistan-peredat-gazotransportnuyu-sistemu-gazpromu-i-ustupit-prava-po-eksportu-gaza-v-kitay (accessed 11 April 2023).
- 80. 'Russia offers gas to Uzbekistan in exchange for a gas transportation system'. *UzDaily*, January 15, 2023, https://www.uzdaily.uz/en/post/78591 (accessed 11 April 2023).
- 81. 'Russian pipeline gas may be sent to markets of Afghanistan and Pakistan Novak'. *TASS*, December 26, 2022, https://tass.com/economy/1556023 (accessed 11 April 2023).
- 82. Asian Development Bank, 'TAPI Shareholders Agreement Initiated'. October 26, 2015, https://www.adb.org/news/tapi-shareholders-agreement-initialed (accessed 6 June 2023).
- 83. V. Soldatkin and O. Astakhova, 'Analysis: Europe wary of Turkish hub to hide gas 'made in Moscow'. *Reuters*, December 1, 2022, https://www.reuters.com/business/energy/europe-wary-turkish-hub-hide-gas-made-moscow-2022-11-30/(accessed 11 April 2023).
- 84. A. Łoskot-Strachota and A. Michalski, 'Turkey's dream of a hub. Ankara's wartime gas policy'. *OSW. Center for Eastern Studies*, March 10, 2023, https://www.osw.waw.pl/en/publikacje/osw-commentary/2023-03-10/turkeys-dream-a-hub-ankaras-wartime-gas-policy (accessed 6 June 2023).

- 85. Ministerstvo Inostrannyh Del Turkmenistana, 'Telefonnyi Razgovor Mezhdu Presidentom Turkmenistana i Prezidentom Rossiyskoy Federatsii'. March 15, 2022, https://www.mfa.gov.tm/ru/news/3066 (accessed 11 April 2023).
- 86. Ministry of Foreign Affairs of Turkmenistan, 'High Level Turkmen-Russia Talks Were Held in Moscow'. June 11, 2022, https://www.mfa.gov.tm/en/news/3199 (accessed 11 April 2023).
- 87. Office of the President of Russia, 'Telefonnyi Razgovor's Prezidentom Turkmenistana Serdarom Berdymuhamedovym'. *The Kremlin*, January 17, 2023, http://www.kremlin.ru/events/president/news/70361 (accessed 11 April 2023).
- 88. 'Prezident Turkmenistana Provyol Peregovory s Predsedatelem Pravitel'stva Rossiyskoy Federatsii'. *Turkmenistan Segodnya*, January 20, 2023, https://tdh.gov.tm/ru/post/34420/prezident-turkmenistana-provyol-peregovory-s-predsedatelem-pravitelstva-rossijskoj-federacii (accessed 11 April 2023).
- 89. Ministry of Economic Development of the Russian Federation, 'Sostoyalsya Rossiysko-Turkmenskiy Biznes Forum'. January 20, 2023, https://www.economy.gov.ru/material/news/sostoyalsya\_rossiysko\_turkmenskiy\_biznes\_forum.html (accessed 11 April 2023). 'Rossiya i Turkmenistan v Hode Biznes-foruma Podpisali Kontrakty Na 150 mlrd Rubley'. *Mir 24*, January 20, 2023, https://mir24.tv/news/16538629/rossiya-i-turkmenistan-v-hode-biznes-foruma-podpisali-kontrakty-na-150-mlrd-rublei (accessed 11 April 2023).
- 90. K. Darden, Economic Liberalism and Its Rivals: The Formation of International Institutions among the Post-Soviet States. Cambridge and New York: Cambridge University Press, 2009.
- 91. 'Uzbekistan launches construction of Trans-Afghan railway line connecting Termez Mazar-i-Sharif Kabul Peshawar'. *KUN.uz*, March 29, 2022, https://kun.uz/en/news/2022/03/29/uzbekistan-launches-construction-of-trans-afghan-railway-line-connecting-termez-mazar-i-sharif-kabul-peshawar (accessed 11 April 2023).
- 92. A. Singh, 'The Economics of Iran-Pakistan-India Natural Gas Pipeline'. *Economic and Political Weekly* Vol. 43. Issue 37 (2008): 57-65. B. Panier, 'Iran Offers Turkmenistan New Gas-Swap Deal To Pakistan'. *Radio Free Europe/Radio Liberty*, April 30, 2018, https://www.rferl.org/a/iran-offers-turkmenistan-new-gas-swap-deal-to-pakistan-tapi/29201086.html (accessed 11 April 2023).
- 93. The latest example happened in August 2023, when Pakistan once again decided to temporarily shelve the project allegedly under the pressure of the US administration. 'Pakistan shelves multi-billion dollar gas pipeline project with Iran under pressure from US: Report'. *Energy World*, August 7, 2023, https://energy.economictimes.indiatimes.com/news/oil-and-gas/pakistan-shelves-multi-billion-dollar-gas-pipeline-project-with-iran-under-pressure-from-us-report/102496797 (accessed 15 August 2023).
- 94. D. Onyango, 'Iran to Fine Pakistan \$18bn Over Delayed Pipeline Project'. *Pipeline Technology Journal*, February 2, 2023, https://www.pipeline-journal.net/news/iran-fine-pakistan-18bn-over-delayed-pipeline-project (accessed 11 April 2023).
- 95. D. Oburn, 'Gazovaya Sdelka Azerbaijana s Rossiey Porozhdaet Nepriyatnye Voprosy Dlya Evropy'. *Eurasianet*, November 23, 2022, https://russian.

- eurasianet.org/газовая-сделка-азербайджана-с-россией-порождаетнеприятные-вопросы-для-европы (accessed 11 April 2023). 'Iran to soon import 9 mln-cubic meter Russian gas daily: ministry'. *News Xinhuanet*, September 20, 2022, https://english.news.cn/20220920/c2ff08d1ec004833abf76f2305047672/c. html (accessed 11 April 2023).
- 96. The risk of supply disruption was named the main issue with the IPI project. See Singh op. cit..
- 97. T.A. Siddiqi, 'India and Pakistan: Pipe Dream or Pipeline of Peace?'. Georgetown Journal of International Affairs Vol. 5. Issue 1 (Winter/Spring 2004): 35-42.
- 98. Shanghai Cooperation Organisation, 'What is the SCO?'. http://eng.sectsco.org/docs/about/faq.html (accessed 11 April 2023).
- 99. Y. Chin and R. Sharma, 'Oil's New Map: How India Turns Russia Crude Into the West's Fuel'. *Bloomberg*, February 5, 2023, https://www.bloomberg.com/news/articles/2023-02-05/oil-s-new-map-how-india-turns-russia-crude-into-the-west-s-fuel#xj4y7vzkg (accessed 11 April 2023).
- 100. 'Russia increases oil supply to India 19 times in 2022: Russian official'. *Xinhua*, June 11, 2023, https://english.news.cn/europe/20230609/635fb85fa49541b384660 c14e7b77014/c.html (accessed 11 June 2023).
- 101. 'India's foreign trade crosses \$800 bn mark in first six months of 2023: GTRI'. *The Economic Times*, August 21, 2023, https://economictimes.indiatimes.com/news/economy/foreign-trade/indias-foreign-trade-crosses-800-bn-mark-in-first-six-months-of-2023-gtri/articleshow/102895328.cms?from=mdr (accessed 5 June 2023).
- 102. M.Narayan and N. Verma, 'Fuels from Russian oil gets backdoor entry into Europe via India'. Reuters, April 6, 2023, https://www.reuters.com/business/energy/fuels-russian-oil-gets-backdoor-entry-into-europe-via-india-2023-04-05/ (accessed 25 August 2023). P. Prem and S. Cho, 'Russian Oil Still Powering Europe's Cars With Help of India '. Bloomberg, April 28, 2023, https://www.bloomberg.com/news/articles/2023-04-28/russian-oil-is-still-powering-europe-s-cars-with-help-of-india (accessed 25 August 2023). R. Millard, 'India offers Russian oil a back door into Britain'. The Telegraph, January 14, 2023, https://www.telegraph.co.uk/business/2023/01/14/india-offers-russian-oil-back-door-britain/ (accessed 11 April 2023).
- 103. 'Jaishankar defends India's move to import Russian oil; says Europe imported 6 times more than India since Feb 2022'. The Hindu, January 3, 2023, https://www.thehindu.com/news/national/jaishankar-defends-indias-move-to-import-russian-oil-says-europe-imported-6-times-more-than-india-since-feb-2022/article66333803.ece (accessed 11 April 2023).
- Glava MID Indii'. Video. Telegram, March 7, 2023, https://t.me/warhistoryalcon after/89952 (accessed 11 April 2023).
- 105. Z. Brzezinski, 'A Geostrategy for Eurasia'. Foreign Affairs Vol. 76. Issue 5 (1997): 50-64. Brzezinski continued the century-long realist geopolitics traditions of Mackinder's "Inner or Marginal Crescent" or Spykman's "Heartland" according to which: "Who controls the Rimland rules Eurasia, who rules Eurasia controls the destinies of the world."

- 106. 'Troystvennyi Soyuz ne slozhilsya'. *Kommersant*, December 8, 2022, https://www.kommersant.ru/doc/5708495 (accessed 11 April 2023).
- 107. Looking at GDP in PPP (purchasing power parity) terms, which removes price level differences and allows a better comparison, especially of living standards, between countries, see e.g. B. Aris, 'Russia overtakes Germany to become fifth biggest economy in the world in GDP on a PPP basis'. bne IntelliNews, August 7, 2023, https://intellinews.com/russia-overtakes-germany-to-become-fifth-biggest-economy-in-the-world-in-gdp-on-a-ppp-basis-286944/ (accessed 12 August 2023).