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Caspian Shelf of Azerbaijan: Prospects for Oil and Gas Production Until 2030 on the Background of the Implementation of Economic Threats to Energy Security

Sergey M. Senderov, Victor I. Rabchuk, Natalia I. Pyatkova and Sergey V. Vorobev

Introduction

The Caspian shelf is of exceptional importance for Azerbaijan to ensure its national energy security. More than 90% of the country's hydrocarbon reserves are located on this shelf. Judging by the importance of the oil and gas complex for Azerbaijan today [1-4] and the share of offshore oil and gas reserves in their total reserves, the development of oil and gas production on the Caspian shelf will be important in solving the problems of ensuring the energy security of this state now and until 2030.

This article will provide a forecast for the development of the oil and gas Caspian shelf of Azerbaijan until 2030. According to the authors, such a forecast is done most convincingly by assessing the main threats to Azerbaijan's energy security; specifically, geopolitical and foreign economic threats. These threats [4] will greatly influence oil and gas production of the Azerbaijani shelf of the Caspian Sea.

The procedure for forecasting the situation is as follows:

1. 2020 is chosen as the initial year for the forecast. For this year [4], the expected quantitative values of the main indicators of the development and functioning of the oil and gas complex of Azerbaijan were obtained. The role of the Caspian Sea shelf in these indicators is separately highlighted.
2. The entire period analyzed in the article (from 2021 to 2030) is divided into two periods: 2021 to 2025 and 2026 to 2030.
3. The nature of the main geopolitical and foreign economic threats to the energy security of Azerbaijan is assessed. The realization of these threats in the future to 2030 may impede the development of the Caspian oil and gas shelf.
4. Based on the results of the assessment, the role of the Caspian shelf, and the ranges of possible values of these indicators, are determined. The authors also note how policy measures can mitigate those impacts.

The main threats to the energy security of Azerbaijan associated with obstacles to the development of the Caspian oil and gas shelf in the period from 2021 to 2030

Assessing the nature of the energy security threats can be described under two aspects: the direction and extent of a threat at a given time over the analyzed period; and the change in the composition of the threat.

To assess the extent and direction of each specific threat, it is important to consider the largest possible number of factors influencing it. With a formal approach, the number of factors considered can be many. In this case, the authors sought to simplify the forecasting process and only consider the most tangible factors. The nature of the threats under consideration in the period from 2021 to 2025 include the following:

- Difficulties in delimiting the shelf of the Caspian Sea between Azerbaijan and Turkmenistan, as well as between Azerbaijan and Iran
- Increased competition between countries (exporters of hydrocarbons)
- Reduction in oil production in the Azerbaijani shelf zone of the Caspian Sea

The first threat is geopolitical, and the second is due to foreign economic plans. The third threat was chosen because if it takes place from 2021 to 2025, it is mainly due to factors of geopolitical and foreign economic plans. For example, the same "shelf" disagreements between the Caspian littoral states or the relatively low expected prices on world hydrocarbon markets will result in reduced production.

Other reasons for choosing to address the above threats to Azerbaijan's energy security over the period from 2021 to 2025 are as follows:

- By 2021, it is unlikely that disputes will be resolved on the right of Azerbaijan to develop the Sardar-Kapaz oil field (claims of Turkmenistan) [5] and the Alov-Araz-Sharg gas field (claims by Iran) [6]. It is also unlikely that by 2021 an agreement will be reached between Azerbaijan and its eastern and southern neighbours regarding the joint development of these disputed deposits.
- A sharp increase in competition among countries exporting hydrocarbons due to an increase in the number of such countries. For example, the United States, with its shale hydrocarbons, Iran with its huge oil and gas reserves, and Turkmenistan with its desire to promote its gas to the world markets of Asia and Europe. Such competition will affect the income of hydrocarbon exporting countries due to lower oil and gas prices. The price of oil in European countries at the beginning of 2013 was at \$115 to \$120 per barrel, and gas was at a little more than \$400 per 1000 m³. Today these prices have fallen; oil is above \$60 to \$70 per barrel and gas is above \$180 to \$230 per 1000 m³.
- Azerbaijan's limited ability to search for new oil fields on the Caspian shelf in real geopolitical conditions. Specifically, the absence of an agreement on the division of the bottom of the Caspian Sea.

In the analyzed period, other geopolitical and external non-economic threats will also appear. These include an increase in the share of wind and solar energy in the energy balances of countries importing oil and gas, a subtle but constant decrease in the energy intensity of the gross domestic product of these same countries, and an increase in the share of electric vehicles in various countries. These threats can be considered as factors that, to one degree or another, will determine the extent and direction of a specific threat. A qualitative assessment of the nature of these threats will be sufficient for subsequent quantitative assessment of changes in the development of the Caspian oil and gas shelf in Azerbaijan.

By analyzing the situation that may develop around the disagreements between Azerbaijan, Turkmenistan, and Iran over the period from 2021 to 2025, we can point out the following:

- Today (2019) these differences do not have an element of hostility between Azerbaijan and these states and therefore these elements are unlikely to influence the upcoming five-year period.
- There is recognition of the growing need for countries to reach bilateral concrete agreements on the joint development of disputed fields on the Caspian shelf. This circumstance allows us to hope for some weakening of the threat to Azerbaijan's energy security related to the conflicts mentioned. This threat will be even weaker if Azerbaijan and Turkmenistan agree to coordinate their actions in the gas environment.
- A rather close relationship between Azerbaijan and Turkey, which largely supports its neighbour, and especially in the gas and oil sectors, should be considered a factor, weakening the threat. Azerbaijani oil is exported through the port of Ceyhan, Azerbaijani gas is exported through Turkish territory, etc.

Russia's objective disinterest in establishing partnership relations between Azerbaijan and Turkmenistan, especially in the gas sector, increases the threat associated with the "shelf" differences. Russia must balance the interests of the former Soviet republics. On one side of the scale is Russia's authority and the quality of its state-general relations with these republics, and on the other, the emergence of competitors in gas markets. Moreover, the importance of Russia as a gas exporter is much higher than that of Azerbaijan and Turkmenistan. Another factor that may prevent the "shelf" differences from ending before the end of 2025 is the expected low world prices for hydrocarbons, at which Turkmenistan and Iran lose interest in ending these differences.

Iran and Turkmenistan have very significant hydrocarbon reserves on the mainland of their states and as such, their offshore fields with small hydrocarbon reserves and high unit costs for their extraction go by the wayside. We can assume that the cumulative effect of factors as a whole from 2021 to 2025 will reduce the significance of the threat to Azerbaijan's energy security related to the presence of offshore disagreements. The weakening of this threat will be very noticeable.

The threat of increased competition between countries exporting hydrocarbons is markedly enhanced in the period from 2021 to 2025. Factors that add to the threat of a decrease in oil production levels include:

- the depletion of exploited Azerbaijani oil fields on the shelf of the Caspian Sea with an increase in unit costs for oil production and preparation for transportation; and
- the absence of any serious prerequisites regarding the possibility of opening new prolific oil fields on the Azerbaijani shelf.

Factors that mitigate this threat include the extension of the "contract of the century" [7] with the receipt by Azerbaijan of a bonus of \$400 million under this contract. Nevertheless, the threat of a decrease in oil production from 2021 to 2025 will be amplified. In the first 2-3 years, the increase is not expected to be very noticeable; in 2018, oil was produced in Azerbaijan even slightly more than in 2017. By the end of the specified period, the increased threat may turn out to be very noticeable.

When assessing the geopolitical and foreign policy threats to the energy security of Azerbaijan, it is important to note that the threats could complicate the development of the Caspian oil and gas shelf in the period from 2026 to 2030. We have assessed these threats in two parts: first, by selecting a list of the threats under consideration, and then assessing the nature of these threats. Although likely that the "shelf" differences will not disappear until 2026, we consider it necessary to add a broader threat to the list in the analyzed period, which is already associated with a decrease in the ability to open new powerful oil and gas fields in the Azerbaijani Caspian shelf.

The main argument for a broader threat is that no matter how the issue of dividing the bottom of the Caspian Sea between the Caspian states is resolved, the area of the Azerbaijani shelf will not be noticeably larger than the one on which various companies are looking for oil and gas for Azerbaijan today. In the existing "indisputably Azerbaijani" areas where new and existing fields are being explored, the opportunities for discovering new significant hydrocarbon deposits are low. Including this threat mutes the impact of a resolution to the "shelf" thus maintaining the possibility of declining oil production. This reduction can now be considered as one of the factors determining the nature of the threat.

For the period from 2026 to 2030, it was deemed appropriate to leave the threat of increased competition among hydrocarbon-selling countries in the list. This threat has already been analyzed for the period from 2021 to 2025. Added to that is the threat of a marked increase in the balance of energy resources of hydrocarbon importing countries in domestic shares of wind and solar energy. The only factor mitigating the threat regarding the opportunities for discovering new powerful gas and oil fields on the Azerbaijani Caspian shelf would be the changing interest of external investors.

Threats will increase significantly from 2026 to 2030 with the intensified competition between hydrocarbon sellers combined with increased attention of hydrocarbon-buying countries to add wind and solar energy resources. The appearance of shale hydrocarbons in the world markets of the United States dramatically changed the price situation for oil and gas. It is very difficult to identify any changes to this situation up to 2030.

For Azerbaijan, as well as for other hydrocarbon exporting countries, the threat of a noticeable increase in the share of wind and solar energy in the balances of hydrocarbon importing countries will increase during the period under review. The corresponding forecasts indicate this. According to various forecasts, the share for developed European countries may grow from today's 10-20% to 30-40% by 2030. The factor that mitigates this threat for Azerbaijan is the expected (but not very large) increase in the consumption of hydrocarbons.

Table 1: The results of the assessment of the direction and extent of the threats to energy security of Azerbaijan from 2021 to 2030

Period	Threats	Nature of threat	Assessment results
2021-2025	Difficulties delimiting the Caspian shelf between Azerbaijan and Turkmenistan, as well as between Azerbaijan and Iran	Geopolitical	Markedly increased threat
	Increased competition between countries exporting hydrocarbons	Foreign policy plan	Increased threat
	Reduction in oil production in the Azerbaijani shelf zone of the Caspian Sea	Multifaceted	Some increased threat
2026-2030	Reduced opportunities for discovering new oil and gas fields on the shelf of the Caspian Sea	Multifaceted	Markedly increased threat
	Increased competition between countries (exporters of hydrocarbons)	Foreign economic	Markedly increased threat
	An increase in the share of wind and solar energy in the energy balances of hydrocarbon importing countries	Geopolitical and foreign economic	Increased threat

Expected values of the main indicators of the development and functioning of the oil and gas complex of Azerbaijan until 2030, highlighting the role of the Caspian shelf

The source materials for this forecast are the expected values of indicators for 2020 [4], as well as the results (Table 1) and materials for assessing the nature of the threats to Azerbaijan's energy security for the periods from 2021 to 2025 and from 2026 to 2030. The following points were also considered:

- Proven oil reserves both onshore and on the Caspian shelf of Azerbaijan will be reduced in the face of reduced opportunities for discovering large new oil deposits.
- Oil production in Azerbaijan with a decrease in reserves and depletion of oil fields will decline throughout the entire period, until 2030.
- Proven gas reserves will increase. Accordingly, production should increase. Realization of the threat of increased competition between gas exporting countries and the threat of a decrease in global demand for it can slow down gas production growth from 2021 to 2025, and this growth may cease altogether during the period from 2026 to 2030.
- Azerbaijan's gas imports should cease amid growing gas production.
- Domestic consumption of natural gas in the country may increase, but not very noticeably.
- Many multidirectional factors will affect the volume of Azerbaijani gas exports. Growth factors in its exports should prevail, at least from 2021 to 2025, although even at this time a very sharp increase in gas exports cannot be expected.

Judging by the expected changes to the main indicators of the development and functioning of the oil and gas complex of Azerbaijan (Table 2), its significance for the country's economy in the period until 2030 will be reduced. It is important to note that decisions made by the country's leadership in 2016 regarding the creation of an ideological basis for development, with a key focus on diversification of the economy, plays a critical role to help neutralize threats.

Table 2: The expected values of the main indicators of functioning and development of Azerbaijan oil and gas complex from 2020 to 2030

Indicators	2018 fact	2020	2025	2030
Proven oil reserves				
Nationwide (million tons)	1000	1000	950-1000	950-1000
Including on the Caspian shelf (million tons)	900	900	900-950	900-950
Oil production volumes				
Nationwide (million tons)	39,2	39,0-40,0	30-35	25-30
Including on the Caspian shelf (million tons)	35,0	35,0	25-32	25-30
Total oil export (million tons)	32,9	33,2-33,7	25-28	18-25
Domestic oil consumption (million tons)	6,3	6,3-6,4	6,5-7,0	6,5-7,0
Proved Natural Gas Reserves				
Nationwide (trillion m ³)	2,1	2,3-2,5	3,0-3,5	3,0-3,5
Including on the Caspian shelf (trillion m ³)	2,05	2,3-2,4	3,0-3,5	3,0-3,5
Natural gas production				
Nationwide (billion m ³)	18,8	19,0-20,0	20,0-25,0	20-30
Including on the Caspian shelf (billion m ³)	18,8	19,0-20,0	22,0-25,0	20-30
Import of natural gas (billion m ³)	1,7	1,3-1,5	-	-
Domestic natural gas consumption (billion m ³)	10,8	10,5-11,0	11-12	12-13
Export of Azerbaijani natural gas (billion m ³)	9,7	10-11	11-13	12-15

Sources: [8, 9]

Access to the Caspian oil and gas shelf of Azerbaijan remains today and will continue to be the most important condition for ensuring the energy security of this state. In 2030, all internal energy needs will be fully covered by the products of this complex, with expected hydrocarbon production significantly exceeding domestic energy requirements.

The following measures can reduce the negative consequences from the threats to energy security in the period up to 2030:

- Diversification of the economy
- The need for a sharp increase in the value of produced hydrocarbons from the development of gas and petrochemicals
- An increase in the volume and depth of oil refining directly in the country

In the future, we should strive for equal profitability of hydrocarbons produced in Azerbaijan in the domestic and foreign markets.

Conclusion

The oil and gas complex of Azerbaijan is based on hydrocarbon deposits on the shelf of the Caspian Sea. Despite a slight decrease in its significance by 2030, the oil and gas complex will remain the most important component of the country's economy and the most important factor for ensuring energy security. A decrease in the significance of this complex can occur due to several geopolitical and foreign economic threats. Possible ways to neutralize such threats completely or partially include increasing the value of produced hydrocarbons in combination with the measures taken by Azerbaijani leadership to diversify the economy. This will allow the country to cope more easily with economic problems and the need to ensure its energy security.

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The Caspian Basin: Less Elaborated Aspects

Anis H. Bajrektarevic, Tanvi K. Chauhan and Mak Bajrektarevic

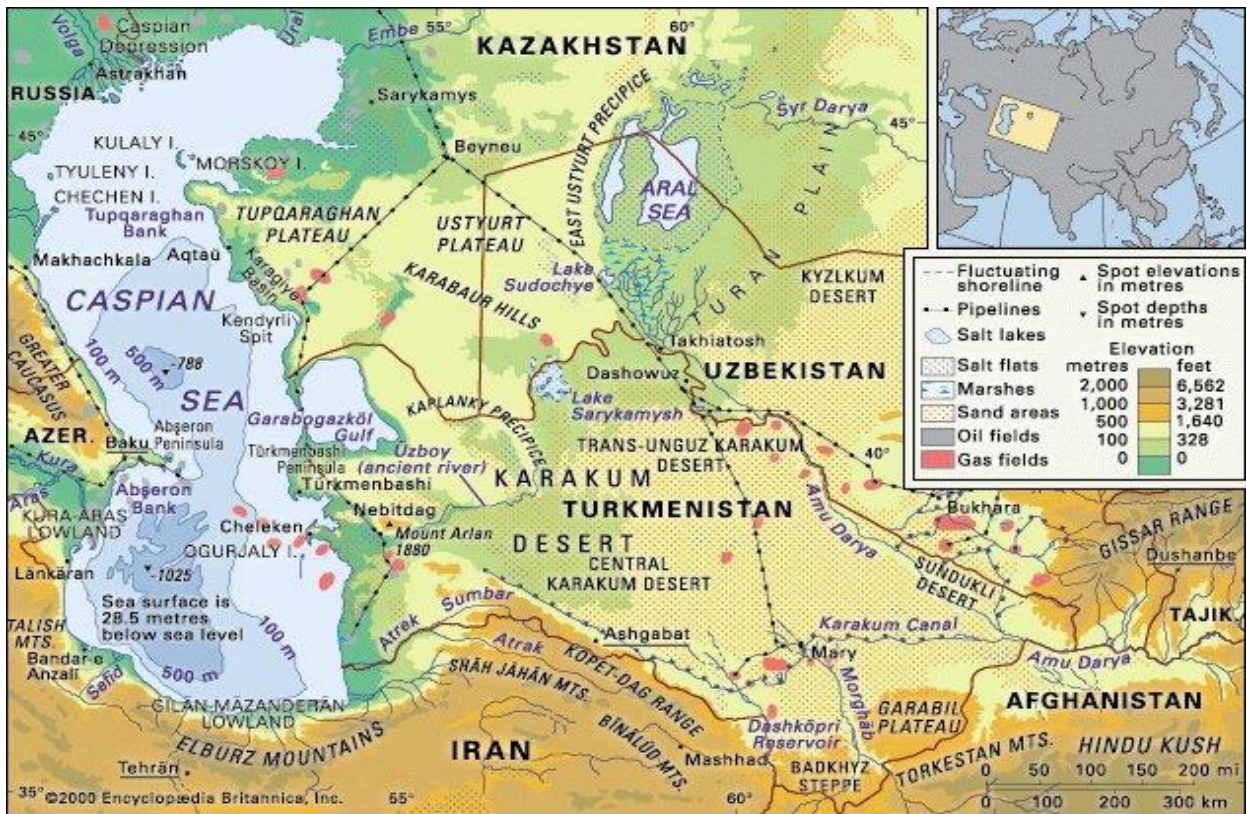
The Caspian Basin is the world's largest inland water body surrounded by five littoral states: Azerbaijan, Iran (Islamic Republic of), Kazakhstan, Russia, and Turkmenistan. Until 2018, the legal status of this unique body of water remained unresolved. Due to its unique hydrology, much international debate centred on whether to call it a lake or a sea.

In August of 2018, a path-breaking agreement was reached between Caspian countries when all parties signed the Legal Convention of the Caspian's status. These recent events offer a ripened opportunity to finally focus on those side-lined issues which have been largely overlooked due to bigger concerns of legal taxonomy and seabed exploitation in the Caspian.

Of course, the Caspian has its share of territorial conflicts and oil-field contests. Still, somewhere in mainstream discussions, other major security concerns happen to be blatantly overlooked in contrast to the energy-centric discussions. But these issues, too, can be of great concern for the overall economic development of the Caspian, which can be maximized only in a stable and secure environment. Here then, we discuss the 'other,' less talked of threats, to the Caspian Basin: environmental hazards, smuggling in and trafficking of various things, as also the modern villain, nonstate terrorism.

The environmental concerns in and around the Caspian include sturgeon and seal population decrease, threats to biodiversity, pollution from oil and gas exploration, and fluctuating sea-water levels. Below is a map showcasing the man-made and natural geography of the Caspian region:

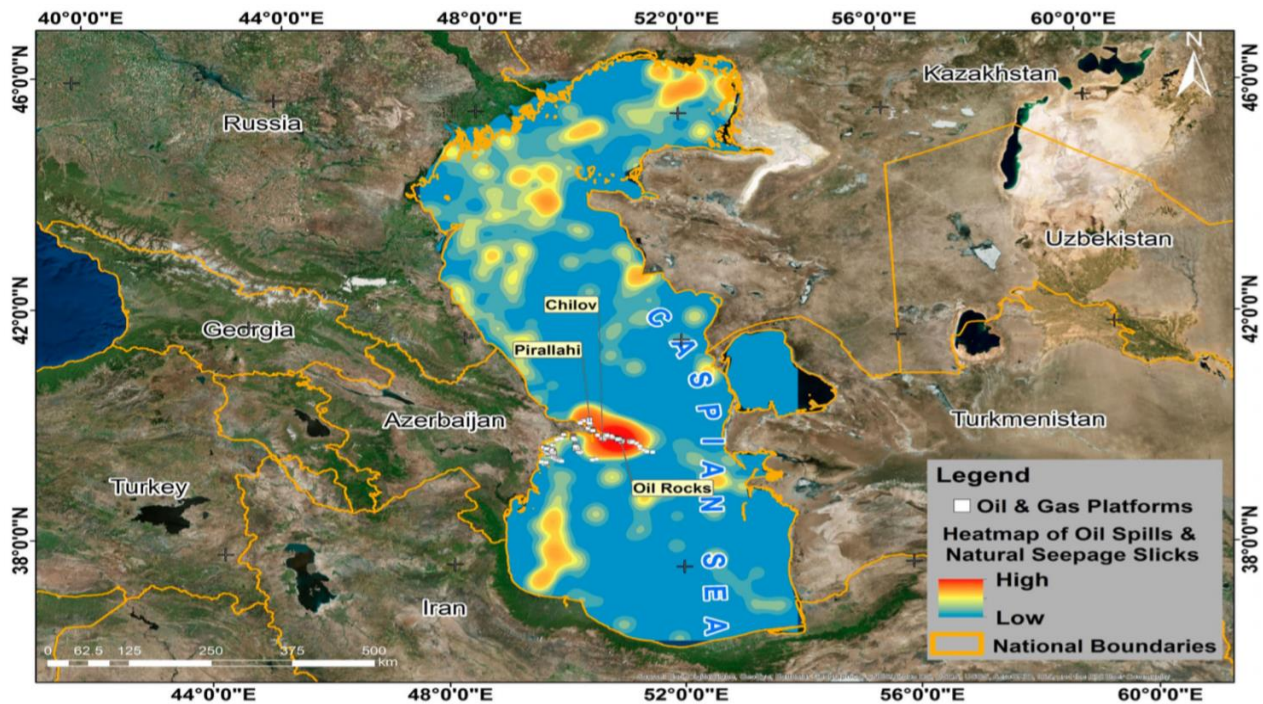
Figure 1: Caspian Environment: Manmade and Natural



Source: Encyclopedia Britannica, 2020

Oil spills and industrial waste is indeed the greatest environmental security concern in the Caspian because it is this that overwhelmingly affects all other environmental problems. Oil spills have two causes: natural and anthropogenic. In the former, oil rocks naturally ooze out oil, whereas, in the latter, human activities related to oil refining, transport, and storage result in oil slicks.¹ Microwave synthetic aperture radar sensors (SAR) satellite imagery is common in detecting oil spills, in combination with bathymetric, geophysical and seismic data to record natural oil slicks in the Caspian Sea. Oil spills raised concern very early on, as early as 2002, when the Tenghiz field in Kazakhstan suffered a terrible spill accident and whose sulphurous by-products came to threaten the very expensive caviar-producing Sturgeon fish. In an oceanographic study, Bayramov et al. (2019) used multi-temporal radar and optical satellite images acquired by SENTINEL, LANDSAT, RADARSAT, ENVISAT and ERS sensors between 1996 and 2017 to detect oil spills in the Caspian. The findings of the latter are illustrated in the figures below. The imagery indicates that the distribution of the anthropogenic oil spills is heavily clustered around the north and northwestern portions of the sea, with the largest man-made oil spill hotspots located near Oil Rocks Settlements, Pirallahi and Chilov Islands, and natural oil slicks mostly located in the southern Caspian area. The triangular area (7566 km²), characterized by the highest risk of oil contamination, is in very close proximity to Azerbaijani capital, Baku. While Azerbaijan is at an increased risk of the negative consequences on marine ecosystem problems arising from oil spills, due to the wind current dynamic within the small closed Caspian climate, spills in one region inevitably come to affect all riparian shorelines. This is not limited to oil spills alone; waste from commercial industries also drag pollutants from shore to shore in a cyclic manner, aggravated by the endorheic nature of the Caspian waters. Of late, numerous Iranian studies have, in fact, identified pollutants on the Southern Caspian coast ranging from micro-plastic sediments from tourism and fishing to oil slick residues.

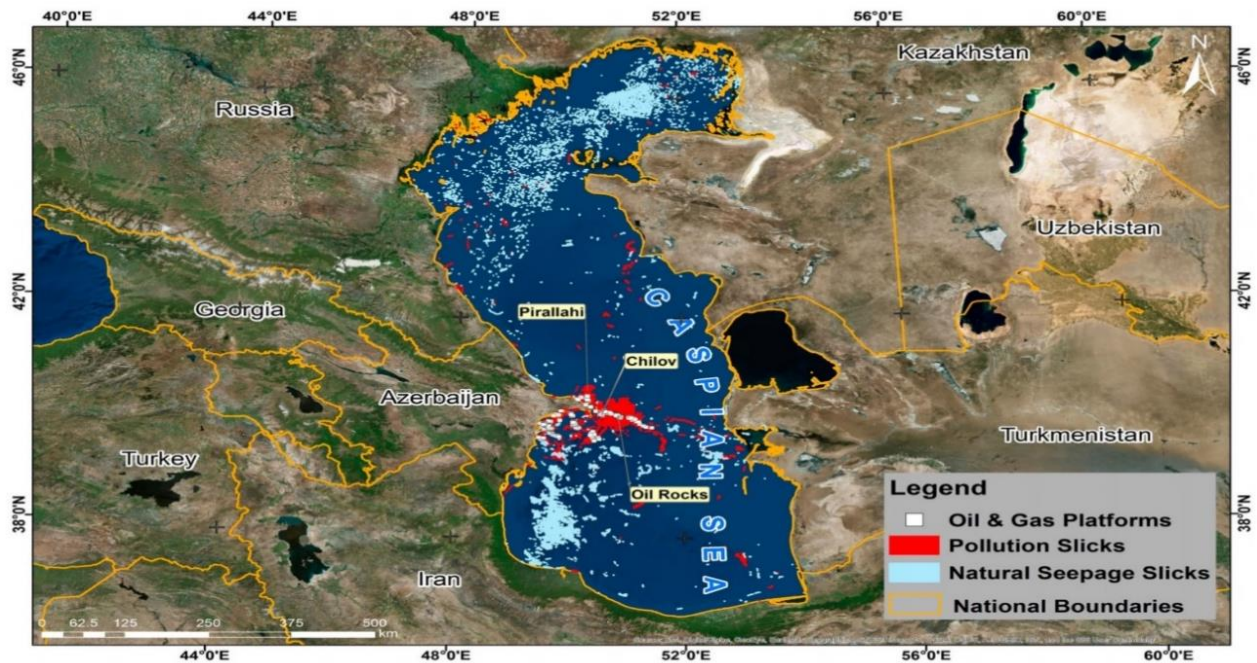
Figure 2: Distribution of Oil Spills and natural seepage slicks in the Caspian Sea



Source: Bayramov, Kada, and Buchroithner, 2018

¹ Slicks a film or layer of oil floating on an expanse of water, especially one that has leaked or been discharged from a ship (OED).

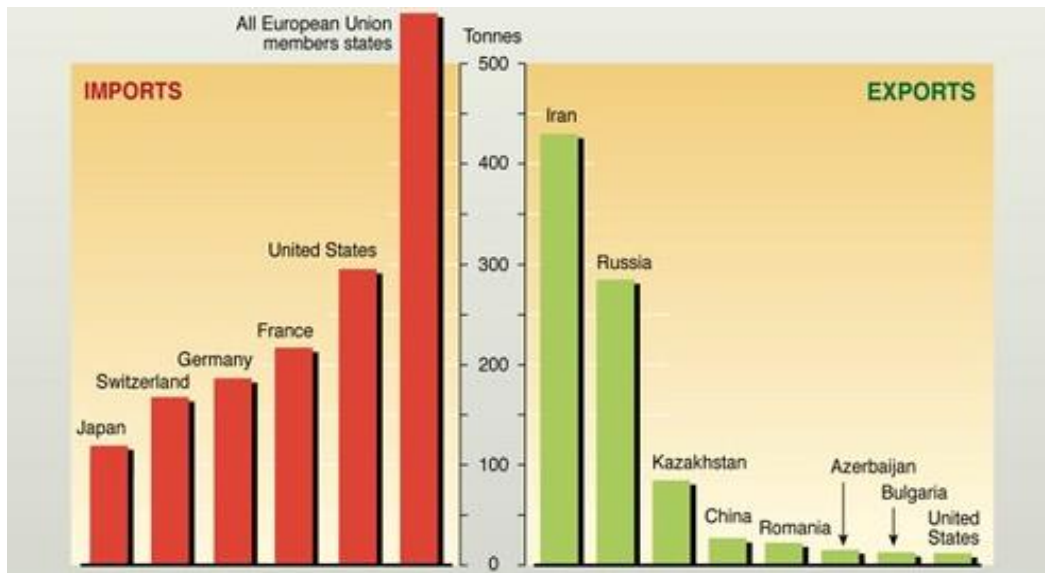
Figure 3: Heatmap of Oil spills and Natural Seepage Slicks



Source: Bayramov, Kada, and Buchroithner, 2018

The Tehran Convention in 2003 served as the first step towards institutional environmental protection within the Caspian. However, the UN Environmental Programme reports that pollution from oil extraction and dumping of industrial waste and sewage is still harming habitats of vast species of flora and fauna, unique only to the Caspian. Some experts also suggest that due to climate change coupled with indiscriminate human exploration activity, the Caspian may soon turn into the next Aral Sea. In all this, hard hit is the commercial caviar and sturgeon industry. According to the Food and Agriculture Organization, reported data from Caspian states excluding Iran indicates that the sturgeon catch has dropped from an average of about 22,000 tonnes a year in the 1970s to about 1,500 tonnes a year since 2002. This is attributed to marine diseases resulting from high water pollution. As a result, almost all Caspian nations became members of the UN Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). They implemented a temporary ban on caviar trade in 2001, which helped only slightly because the fish have another problem to face - illegal trade and poaching. Since it is very difficult to precisely identify how much is illegally traded, the latest (most likely accurate) data on illegal caviar trade comes from the CITES trade data for the years 1998-2003. Presently, what can be safely assumed, however, is that despite sturgeon's depleting numbers, illegal trade would have only increased in the black market given the increase in value of this rare luxury commodity.

Figure 4: Overview of Illegal Caviar Trade, 1998-2003



Source: Vital Caspian Graphics 2012

Depleting sturgeon stocks is a security concern for states beyond the aspect of illegality and marine biodiversity. Sturgeon's extinction puts at risk the huge economic asset that Caspian states have outside of their finite economic resource – hydrocarbons. The prized fish is vital for riparian states which aim to diversify their economies away from hydrocarbons. Alongside the Beluga sturgeon, the rare Caspian seal population is also at risk, which in turn threatens the Caspian ecosystem balance. The IUCN classified the Caspian seals as endangered on its red list of threatened species. The CEP in 2007 reported that the seal population was decreasing at an unprecedented rate for luxurious seal oil and fur.

It is by no surprise that where Caspian's native species were steeply falling, invasive foreign species took to Caspian waters. Worth mentioning here is the comb jelly, which had already become infamous for invading the Black and Mediterranean seas. What is more apprehensive about this detail is that such scattered imbalances of flora and fauna can tip off delicate stability much faster and sooner in a *closed* water system characteristic of the Caspian.

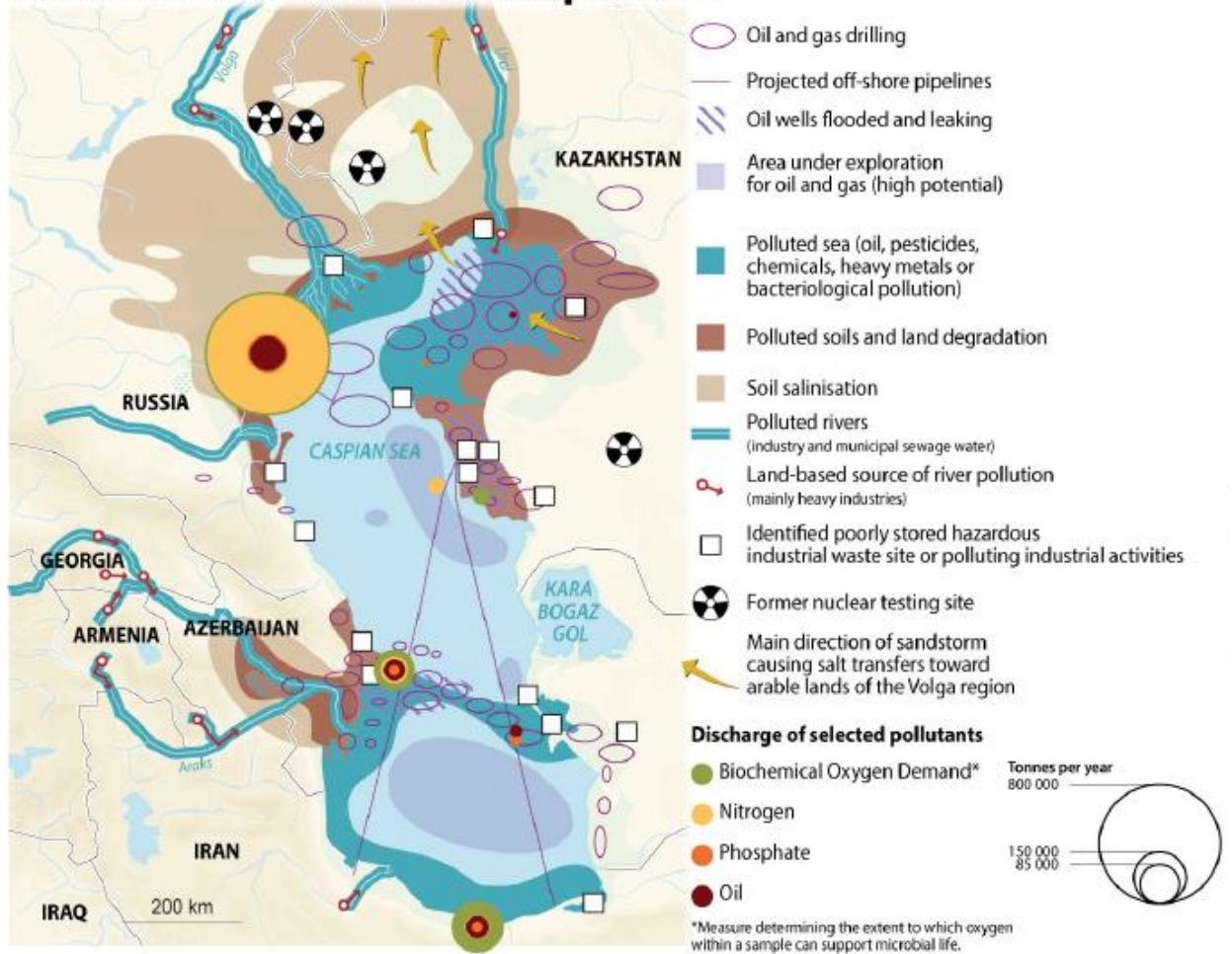
Riparian actors have made some attempts to protect the Caspian environment. The first of these efforts was the CEP Caspian Environment Programme (CEP) of 1998, which pooled all five littoral states and four international donor organizations from the UNEP, World Bank, EU/Tacis, to the UNDP. This was the start of a regional environmental system, leading up to others such as the National Caspian Action Plans (NCAPs) and the Strategic Action Programme (SAP), all of whose aims were to address common environmental concerns and implement action plans that were incorporated into domestic legislation. The good thing about this approach was that it conjoined forces at the government level and the civilian level. The 2003 Tehran convention started seeing the small successes of these endeavours. Of late, the 2018 Aktau convention has further raised hopes for implementing a collaborative effort to protect Caspian's marine life and ecosystem from environmental danger. The convention agreed to maintain and improve existing reserve areas like Astrakhan in the North, Khazar in the south-east, and Gizil-Agac in the south-west.

Individual riparian states have also vowed to do their bit in Caspian's ecological sustainability through their fishery committees (Kazakhstan; Azerbaijan; Iran) or ecology ministries/agencies (Russia; Turkmenistan). Apart from that, green ports and renewable energy is also being considered by some Caspian nations to curb the hydrocarbon dependence in the long run.² On the other hand, where pisciculture facilities exist, like Shirvan in Azerbaijan, where sturgeon are artificially bred and released to support the sturgeon population. Many states are still lacking that capacity.

² While coal dominates Kazakhstan's energy consumption for instance, it is nevertheless striving towards renewable electricity generation according to the IEA.

Nevertheless, these efforts are a big step to curb the hazards. Still, since the Caspian is rich in natural resources, environmental concerns take a backseat against the political and economic profits realized from the hydrocarbon industry.

Hazards in and around the Caspian Sea



Smuggling of and Trafficking in

Some Caspian states suffer from being source countries for men, women, and children subjected to forced labour and sex trafficking. The porous borders between Azerbaijan and Georgia, not to mention the un-demarcated Armenian borders concerning the Nagorno-Karabakh conflict zone, leads to the illegal transit of goods and people. Organized crime syndicates are the main reason behind Russia's human trafficking issue. In contrast, in Iran, forced labour from displaced persons and migrants from Afghanistan seems to be the key concern. For countries like Kazakhstan and Turkmenistan (especially the latter), the human trafficking objective is to supply labour for emigrant countries, Turkey and Russia, where they work in formal or informal industries ranging from textiles and agriculture, to waste sorting and street sweeping.

The region has also witnessed a substantial increase in illicit drug trafficking. To address this issue, there has been a vivid cooperation among all the Caspian littoral countries. A major step forward was the decision of the Caspian littoral and other Central Asian states, to establish a Central Asia Regional Information and Coordination center in the city of Almaty, Kazakhstan. The center is also supported by the UN Office on Drugs and Crime. Based on seizures at customs, there is enough evidence to suggest a vibrant transnational smuggling activity in Central Asia, even if no national groups are involved in regional trafficking.

Nevertheless, Caspian countries are generally successful in counter-drug and trafficking intelligence through high interdiction efforts and strict punishments (like the death penalty in Iran for drug-related offences). This security hazard is an important factor in the overall stability and future of the Caspian region, and like any other security problem, warrants continued counter-measures from all riparian states, even if the problem is not as egregious compared to other issues.

Terrorism and Asymmetric Threats

The Caspian states see terrorism as one of the major foreign and domestic threats, not just in a political sense for threatening the pivotal state institutions but also in economic terms since terrorist actions can target major pipeline infrastructure in the process of gaining their goals or widespread attention. However, except for Iran and Russia's Federal republic of Dagestan, radical Islamism is not as prominent within the Caspian region as it is in the Middle East and North-Africa, mainly due to the secular nature of Azerbaijan, Kazakhstan, and Turkmenistan. Nevertheless, since 9/11, all Caspian states (save Iran) have tightened their security measures in response to terrorism. These measures include establishing counter-terrorism processes, prosecuting individuals suspected to be a part of a terrorism network or activity, and even increasing training for security workforces. Since all Caspian littoral states still have a vivid memory of the support some of their citizens displayed for the Taliban in Afghanistan, a rise in support for the ISIS movement in the Middle East, especially in Kazakhstan and Turkmenistan have generated renewed fears about the security threat terrorism presents in the Caspian.

In the case of countering terrorism and the proliferation of WMS, the US recognized a superb opportunity to insert itself in the region by offering a helping hand to former Soviet republics, surrounding the Caspian. They have introduced the Second line of defence program and the Caspian Sea Maritime Interdiction, among others. Both programs are mainly focused on uncovering possible illicit trafficking of radioactive material, with the Maritime Interdiction program being focused on the Caspian basin maritime border between Azerbaijan and Kazakhstan. But despite such doings, the US has not converted the opportunity presented by this global threat into tighter regional cooperation with the Caspian states, which could potentially ease the status quo in Afghanistan where the Taliban threat is still as dynamic.

Also active on the field of anti-terrorism is the SCO (Shanghai Cooperation Organization), a Eurasian political and security alliance whose initial purpose was precisely to combat terrorism in Russia and China alike. The already outlined conflicts in Chechnya and the Republic of Dagestan alongside the destabilization and renewed extremism in Syria (ISIS) have kept Russia nervous about the reach and effects of terrorism. The same is true for China, which is battling its modest threat in the autonomous province of Xinjiang, where a Turkic Muslim group called the Uyghurs is calling for freedom of cultural expression. A small fraction of this ethnic set has manifested into a more violent grouping called the Turkistan Islamic Movement (TIM). These TIM militants have found senior roles in transnational terrorist networks like Al Qaeda and Islamic State, and they work to lure in the government-repressed Uyghur population to commit to radicalism (Wilson (2019)).

The Organization of Islamic Cooperation (OIC) is also a minute contributor herein. The OIC is a collective pan-Muslim organization comprising majority-Muslim states whose aim is to safeguard and protect the interests of the Muslim world while promoting international peace and harmony. Turkmenistan, Azerbaijan, Kazakhstan, and Iran are members, while Russia is an observer state. Although OIC adopted a convention on combating non-state international terrorism as early as 1999, contradictions in definitions and understanding of terrorism have led to frequent disagreements with NGOs and non-OIC members. Although this organization has the potential for collective action,³ diverging notions about terrorism, allegations and support of human rights violations, and criticism to bring about real solutions for the Muslim crisis countries (like Palestine and Syria) make this entity a detached and dispassionate participant within the Caspian.

Europe, too plays a part in combating terrorism and arms control through its Organization for Security and Cooperation in Europe (OSCE). Its inclusive membership serves as a forum for political dialogue on a wide range of security issues and a platform for joint action between many states. Since the organization uses a comprehensive approach to security that encompasses politico-military, economic-environmental, and human dimensions, its influence could be wide-ranging. However, within the Caspian, it appears to be working more so on environmental areas like the establishment

³ When a Danish newspaper in 2005 published cartoons of Muhammed, the OIC found it offensive and condemned the publication. This issue received wide coverage in Islamic countries and catalyzed violent demonstrations.

of green ports and strengthening inter-regional cooperation on promoting sustainable maritime transportation. OSCE's politico-military security aspects within the Caspian are a lesser enterprise.

In any case, combating the threat of terrorism has resulted in the militarization of the area surrounding the Caspian basin. This can be considered a dangerous development since the accessible weaponry, and military force makes it all the easier to shift from diplomatic measures to military ones in a region that is already battered by many other serious security considerations.

Does it Matter Anyway?

What do these overlooked threats mean for Caspian and its littoral states anyway? Unlike the geographic nature of the Caspian basin, the threats it faces are not closed. They are striking in from various directions. Yes, border issues such as the Nagorno-Karabakh conflict, unrest in South Ossetia, conflict zones in North Caucasus like Dagestan are all profoundly important matters to the stability of the Caspian, but these issues are further exacerbated by these overlooked threats taking place in the background: smuggling and trafficking from Eurasia, terrorism from the Middle-East and East-Asia, and environmental peril from within its own home. The geopolitical dynamic of the Caspian states is another layer of complication that heightens these threats. Where the northern Caspian states Russia, Azerbaijan, and Kazakhstan have had successful negotiations on various issues, Southern Caspian states Azerbaijan, Russia, and Turkmenistan have a lot of disputes to resolve for any trilateral unanimity to occur on any threats. However, the 2018 Legal Convention presented a hopeful framework for the collective tackling of these common threats, but before a five-party ratification, even that is nothing beyond a literal 'hopeful.'

If Caspian states desire comprehensive development of their region, everything from territorial conflicts to non-territorial conflicts must necessarily be taken seriously, for no extraction, refineries, or pipeline projects (including the expansion to SCP or the new prospect TCP) is possible without tackling exogenous and indirect menaces to the uninterrupted operation of these. Due to the landlocked nature of the Caspian Basin, the NISs are dependent on at least one adjacent country to export. Not only does this mean that economic infrastructure and relations with transit countries need to be good, but any threats (direct and indirect) in producing, supplying, and delivering of the product must also be eliminated. Consider this: what use are the thousands of cubic feet of gas in Azerbaijan when it is unable to export it through Armenia and Georgia due to the unsteady conflict zones? Or the barrels of oil in Kazakhstan when oil spills from an accident have come to harm the marine and human life in the region? Or the production rates in Southern Russia when terrorist ideas have claimed the energy industry as its income and bargaining source? These are hypotheticals, but they illuminate the possibilities of overlooked threats going haywire if left neglected for long.

*This excerpt was taken from the manuscript of the upcoming book, **Caspian: Status, Challenges, Prospects** by Professor Anis Bajrektarevic, Tanvi Chauhan and Mak Bajrektarevic. In this forthcoming work, they also dwell on territorial threats surrounding the Caspian, along with the geopolitical and geo-economical dynamic of all littoral Caspian states. This work aims to present a complete overview of the Caspian Basin for the first-hand reader. It dives right into the legal classification, security concerns, geopolitics, and energy dynamics of the Caspian broadly ranging from energy reserves and transportation to the various pipelines that variegate the region. This book is hoped to be the one-stop-shop for anyone studying the Caspian affairs that is both brief and comprehensive*

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