

The Caspian Sea: rivalry and cooperation.

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The Caspian Sea is estimated to be the world's third largest reservoir of oil and natural gas after the Persian Gulf and Russia. But, since the disintegration of the USSR in 1991, its rich resources have generated disagreement among the littoral states (Russia, Iran, Azerbaijan, Kazakhstan and Turkmenistan) over ownership of its resources. In addition, the region's huge energy potential has sparked intense competition among both the producer and the consumer countries regarding the final export routes of its oil and natural gas. This article will discuss different aspects of the rivalry among the coastal states, on the one hand, and foreign powers, on the other. Areas of cooperation among them will also be described.

GEOGRAPHY

The Caspian Sea is the largest enclosed body of water on the earth, larger than the American Great Lakes or Lake Victoria in East Africa. It is a saltwater lake situated where Southeastern Europe meets Southwestern Asia. The Caspian borders Azerbaijan and Russia on the west, Kazakhstan on the northeast and east, Turkmenistan on the east, and Iran on the south. It is approximately 1,030 kilometers long, while its width ranges from 435 km to 196 km. The water level varies from year to year. At 26.5 meters below mean sea level, its coastline is approximately 7,000 km in length and its surface area is about 386,400 square kilometers. The water volume of the sea at this level is about 78,700 cubic kilometers. (1)

Historically the water level of the Caspian Sea has been 26 m below sea level. (2) But a decline resulted in a reduction of its surface area from 430,000 [km.sup.2] in 1930 to 382,000 [km.sup.2] in 1957, leaving it at approximately 28 m below sea level. Within the last 160 years, the level of the sea has fluctuated between 25.2 m (1882) and 29 m below sea level (1977). The decline amounts to 3.8 m and 3.2 m in the last 100 years. As a result of a rise in the water level from 1975 to 1995, an area of 12,500 [km.sup.2] of land was flooded. (3) Scientists predict that the Caspian will continue to rise another one to one-and-a-half meters until 2020 and will then stabilize for the following 40-50 years at 26 meters below sea level. But this one-meter rise would flood many oil wells, pipelines and refineries along the Azerbaijan coast. (4)

According to Xavier de Planhol, the sea's estimated surface area in 1986 was 378,400 [km.sup.2] and its water volume 78,600 [km.sup.3]. It consists of three distinct sections. A shallow northern basin (91,942 [km.sup.2]), never more than 25 m deep and less than 5 m deep over two-thirds of its area, accounts for nearly 25 percent of the sea's total surface area but only 0.5 percent of total volume. The central and southern basins are deep. The central basin, with a surface area of 137,812 [km.sup.2], a maximum depth of 788 m and an average depth of 192 m, contains 33.9 percent of the total volume of water. The southern basin, with a surface area of 148,646 [km.sup.2], a maximum depth of 1,025 m and an average depth of 345 m, contains 65.6 percent of the volume. (5)

The sea's water is three times less saline than ocean water because it is a remnant of the ancient ocean Tethis. About 50-60 million years ago, Tethis connected the Atlantic and the Pacific Oceans, but, due to a gradual shift of continental plates, it lost its connection with the Pacific and later with the Atlantic. Approximately 130 large and small rivers flow into the Caspian Sea, almost all into the northern and western coasts. Over 90 percent of the inflow of freshwater is supplied by five large rivers: the Volga (the largest), Kura, Terek, Ural and Sulak. The Iranian rivers and the smaller streams on the western shores supply the rest. There are no permanent inflows on the eastern coast. (6)

The southern and southwestern coasts of the sea are bordered by the Elburz and Caucasus Mountains, respectively. Navigation is frequently dangerous due to violent southern storms. During the winter months, the northern parts of the sea are closed by ice. The chief ports are Krasnovodsk, Turkmenistan; Baku, Azerbaijan; and Makhachkala, Russia. (7)

The Caspian Sea has no outlet; however, it is linked to the Sea of Azov, the northern section of the Black Sea, through the Volga-Don and Manych Canals. The Sea of Azov is connected to the Black Sea through the Kerch Strait. The Volga and Don Rivers are connected at the closest locations between them by the 101-km-long Volga-Don Canal completed in 1952. (8)

OIL AND GAS RESERVES

The Caspian fields began producing oil near Baku, Azerbaijan, in 1871 and accounted for half of the world's limited production in 1900. (9) From 1872, the oil companies of Europe had been interested in Baku oil; Robert Nobel,

along with his brothers Ludwig and Alfred, spent 25,000 rubles to develop Caspian fields and started an oil company in 1879. The first oil tanker in the world was commissioned on their orders in 1877. However, the industrial production of oil in the sea started in 1949 during the Soviet era. (10) The sea contains six separate hydrocarbon basins, most of which have not been developed yet. Most Azerbaijani oil resources, proven and potential, are located offshore, as are perhaps 30-40 percent of the total oil resources of Kazakhstan and Turkmenistan. In the tables below, proven oil and gas reserves are defined as 90 percent probable; possible oil and gas reserves are defined as 50 percent probable (see tables 1 and 2). (11)

OIL

Azerbaijan and Kazakhstan

Development of the region's oil resources has been led by three projects: the Tengiz and Karachaganak fields in Kazakhstan and the Azeri, Chirag and deepwater Gunashli (ACG) fields in Azerbaijan. These three projects produced an average of 693,000 barrels per day (b/d) from January to September 2006, roughly 30 percent of the regional total. Development of these decade-old key projects gave rise to an influx of new investment and infrastructure development that constitutes the "second Caspian oil rush," the first having occurred in the late 1800s. (12) The Tengiz field, Tengizchevroil, is being developed in a 50-50 joint venture worth \$20 billion, begun in 1993 by Chevron and Kazakhstan. It is estimated that the field contains recoverable oil reserves of 6-9 billion barrels. Tengizchevroil produced 190,000 b/d in 1999 and 340,000 b/d in 2002. It is expected to reach its peak of 750,000 b/d by 2010. In September 1994, the Azerbaijan International Operating Company (AIOC) signed an \$8 billion 30-year contract to develop Azeri, Chirag and the deepwater portion of Gunashli, with proven reserves estimated at 3-5 billion barrels. Almost all of Azerbaijan's increase since 1997 has come from AIOC. The production from these fields is expected to reach 800,000 b/d by 2010. (13) Major discoveries were announced in Azerbaijan at Shah Deniz in 1999 (600 million barrels of condensate and 15 trillion cubic feet of natural gas) and in Kazakhstan at Kashagan in 2000 (7-9 billion barrels of recoverable oil with further potential totaling to 9-13 billion barrels using secondary-recovery techniques). (14)

Turkmenistan

Proven oil reserves in Turkmenistan are considerably smaller and markedly less developed than those in Azerbaijan and Kazakhstan. Some companies have been successful in the upstream sector in Turkmenistan with production-sharing agreements. Petronas began producing roughly 10,000 b/d from the Diyarbakir field in mid-2005; Dragon Oil produced roughly 18,000 b/d from its Chelekan field during the first half of 2006; and Burren Energy is producing around 17,500 b/d from its onshore Nebil Dag block. (15)

Russia and Iran

Lukoil announced in early 2006 that it had found a large oil prospect at the V. Filanovskogo offshore field. The company plans to develop six fields in the Russian section of the Caspian Sea, which contains roughly 6.5 million barrels of oil, and expects a maximum output of 140,000 b/d by 2016. In the mid-1990s, six exploratory wells were drilled in the Iranian sector of the sea, but they did not yield commercially viable discoveries. Iran's North Drilling Company (NDC) signed an agreement with China's Oilfield Services Ltd. in January 2006 to drill in waters over 2,000 feet deep. In December 2005, Lukoil announced a major discovery of 1 billion barrels of oil on the Anaran block at the Azar field in western Iran. (16)

NATURAL GAS

Natural gas reserves of the Caspian Sea are even greater than the region's oil reserves. The majority are located on the east side of the sea, in relatively remote areas of Turkmenistan, Kazakhstan and Uzbekistan. The 1999 natural-gas discovery of Azerbaijan's Shah Deniz field has boosted the prospects of the region's natural-gas exports. (17)

Unlike oil, the Caspian's natural-gas resources were extensively developed under the Soviet Union. The region's gas production, excluding major producer Uzbekistan, was 3.9 trillion cubic feet (tcf) in 1990 (see tables 3 and 4). (18)

Turkmenistan

Following the disintegration of the Soviet Union in 1991, gas production from Turkmenistan collapsed because of competition from Gazprom, the Russian natural-gas company. Since Gazprom owned all the pipelines, and all export routes passed through Russia, Turkmen natural gas was squeezed out of the hard-currency market. Therefore, Turkmenistan's incentives for increasing its production of natural gas disappeared. Its production dropped throughout the 1990s from 2.02 tcf in 1992 to just 466 billion cubic feet (bcf) in 1998, when Turkmenistan was locked in a pricing dispute with Russia. In 1999, a Turkmen-Russian agreement resulted in a production

increase to 788 bcf and, in 2000, production skyrocketed to 1.64 tcf, reaching 2.3 tcf in 2005. The September 2006 agreement with Russia guaranteed initial natural-gas exports of 212 bcf in 2005, increasing to 1.8 tcf in 2007 and remaining at 2.8 tcf during 2009-2028. (19)

Azerbaijan and Kazakhstan

In 1999, Azerbaijan's natural-gas consumption and production were roughly 212 bcf. But the discovery of the Shah Deniz field has changed that. Both Azerbaijan and Kazakhstan plan to increase their production significantly by 2010 in order to become net exporters of natural gas. Kazakhstan's natural gas production increases are expected to come primarily from associated natural gas at its three largest fields: Tengiz, Karachaganak and Kashagan. (20)

Since the Caspian region is landlocked, its oil and natural gas have to be transported through pipelines. Therefore, the export routes are as important as the resources, because those countries through which the pipelines pass gain considerable influence over both producer and consumer countries. Thus, one of the main areas of rivalry involves these routes (discussed below).

LEGAL REGIME OF THE CASPIAN

Prior to the disintegration of the Soviet Union in 1991, only two countries bordered the Caspian Sea, the Soviet Union and Iran; thus, it was regarded as a shared Soviet-Iranian sea. After the collapse of the Soviet Union, however, Azerbaijan, Kazakhstan and Turkmenistan were added to the littoral states of the sea. As a result, the geopolitical situation of the Caspian changed entirely. The Newly Independent States have challenged the existing regime of the sea, and generated disputes regarding ownership and development rights there.

The current legal status and regime are both based on the Soviet-Iranian treaties and agreements. The first treaty on demarcation and cession of certain territories was the Treaty of Rasht (1729), concluded between the Russian and Persian empires; it provided freedom of commerce and navigation. The Golestan Treaty (1813) and the Turkmanchai Treaty (1828) provided Russia with exclusive rights to have a naval fleet in the Caspian Sea. The 1917 revolutionary government of Russia abrogated all previous agreements with Persia. The Treaty of Friendship between the Russian Socialist Federal Soviet Republic (RSFSR) and Persia, signed on February 26, 1921, constituted the basis of bilateral relations between the two countries. The 1935 Treaty between the USSR and Iran (renamed in 1935) was replaced in 1940 by the Treaty of Commerce and Navigation. Both treaties reserved military and commercial navigation, as well as fishing rights, for Soviet and Iranian vessels and other vessels flying their flags. They therefore excluded third states and their nationals from being crew members or port personnel in the sea. Both treaties of 1935 and 1940 provided freedom of fishing in the entire Caspian, except within a 10-mile zone along their respective coasts. Marine scientific research, oil and gas explorations and drilling in the areas adjacent to the coast are vaguely mentioned in the 1921 and 1940 treaties. A note attached to the 1940 treaty includes only one clear expression that the Caspian Sea is "regarded by both contracting parties as a Soviet-Iranian Sea," referring to an international instrument of condominium. (21)

As mentioned earlier, the three Newly Independent States of Azerbaijan, Kazakhstan and Turkmenistan challenged the legal validity of treaties that had been in force for several decades. Under the Vienna Convention on Succession of States in Respect of Treaties (1978), in cases of the separation of parts of a state, any treaty in force at the date of succession of states remains in force unless the states agree otherwise. Thus, the rights and obligations of the predecessor state and its successors are equally binding on all. This was affirmed by the Alma-Ata Declaration of 1991, which committed the Newly Independent States to fulfill the obligations arising from the treaties and agreements concluded by the Soviet Union. (22)

But if the existing regime is considered ineffective by the Newly Independent States, and they believe that Caspian resources cannot be utilized jointly on a condominium basis due to an increase in the number of coastal states, what then should be the approach for settling the dispute? Indeed, it primarily depends on what the legal status of the Caspian is. If it is a sea in legal terms, the UN Convention on the Law of Sea (UNCLOS) of 1982 would be applicable. If it is a lake in legal terms, international law regarding border lakes would apply. But the Caspian Sea does not seem to fall into either category. In a commentary made by the International Law Commission on Article 26 of the 1956 draft convention on the Law of the Sea, Part II (the High Seas), some large bodies of water entirely surrounded by dry land were known as lakes, others as seas. If the coasts of such stretches of water, "including those of the waterway giving access to the high seas, belong to a single state," they are considered internal seas. Although the Caspian Sea is connected to the Black Sea through the Volga-Don Canal, which is not a salt-water body, transit exclusively depends on the permission of the states through which the canal passes. Thus, the Caspian Sea may be considered a transboundary lake, not a sea. An international lake is one surrounded by territories of different states. In the absence of an international convention regarding international lakes, custom seems to be the primary source for the Caspian Sea's legal regime. The principle of geographical middle line and approximate (formal) middle line are most frequently applied in international practice. In international law, the borders of a lake can be determined by astronomy, a straight line and, in some

cases, land boundaries or historical borders. In the case of the Russian-Kazakh Treaty of July 6, 1998, a modified border line was applied for the first time. (23) It is clear that the Caspian Sea is a water body surrounded by five states, which must determine its legal regime unanimously.

Conflicting Views of the Littoral States

In order to have a clear vision of the dispute regarding the delimitation of the Caspian Sea, it is necessary to define the viewpoints of coastal states. These vary from retaining the existing regime to completely changing the status quo. On one end is Iran and previously Russia, which insist on the current regime; on the other is Azerbaijan, which seeks a thorough change of the legal regime.

Azerbaijan believes that the Caspian Sea is an international (border) lake. Therefore, it should be divided into national sectors on the basis of the median (middle) line in which every state has full sovereign rights on both the surface and the seabed in its sector. It even refers to the division made in 1970 by the Soviet Ministry of Oil, which divided the Caspian Sea among its republics for operational purposes. On that basis, Azerbaijan received 70,000 [km.sup.2], Kazakhstan 105,000 [km.sup.2], Turkmenistan 80,000 [km.sup.2], Russia 60,000 [km.sup.2], and Iran the rest of the sea, 55,000 [km.sup.2]. (24)

It should be remembered that, according to Article 15 of UNCLOS, the territorial seas of states with opposite or adjacent coasts must not extend "beyond the median line, every point of which is equidistant from the nearest points on the baseline from which the breadth of the territorial seas of each of the [two] states is measured." (25)

Azerbaijan's position regarding the delimitation of the Caspian is expressed by the statement made by the Ministry of Foreign Affairs on December 14, 1998: "Each sovereign Caspian state develops the mineral resources in its own national sector. The Soviet-Iranian Treaties of 1921 and 1940 covering questions relating to navigation and fisheries do not regulate questions relating to the mineral resources of the Caspian Sea." (26)

Kazakhstan is less radical, believing that the Caspian is an enclosed sea governed by the Law of the Sea, according to which every state has a territorial sea, exclusive economic zone and continental shelf. But, given the size of the Caspian sea, this approach can only result in a de facto partition of the sea among the littoral states. In fact, Kazakhstan is in favor of the division of the seabed on a median-line basis but joint use of the surface. More clearly, it demands the right to carry out the exploitation of mineral resources in its sector independently while using a common surface with access to Russian waterways (Volga-Don) in order to have an outlet to the high seas. (27)

Turkmenistan's position in this respect has changed during the last few years and is still ambiguous. It generally supported Iran and the initial Russian opposition to the complete division of the sea. In December 1996, Russia, Iran and Turkmenistan proposed a 45-mile zone to exploit the non-living resources of the sea and joint ownership of the rest. Later, in a joint statement made by the presidents of Turkmenistan and Kazakhstan, on February 27, 1997, the two countries agreed to delimit the sea on the basis of the median line. They also agreed to recognize the division made by the Soviet Union in 1970 to constitute the states' borders following the disintegration of the USSR. But on July 8, 1998, the presidents of Turkmenistan and Iran issued a joint statement that stipulated that until finalization of a new legal regime, the treaties of 1921 and 1940 would remain in force and agreed on the condominium principle for the common utilization of Caspian resources. In case of a division of the sea, they emphasized the equal share (20 percent each) of all the littoral states and a unified legal regime for the surface and the seabed. Apparently the dispute between Turkmenistan and Azerbaijan regarding demarcation of their national zones and ownership of the Kyapaz oil field made Turkmenistan change its position and lean towards the Iranian position. (28)

Initially Russia, along with Iran, insisted on enforcement of the provisions of the 1921 and 1940 Soviet-Iranian treaties, which considered the Caspian as a shared sea to be exploited on a condominium basis. Russia, in particular, believed that the Caspian Sea has no natural link to the high seas and that therefore the norms of international maritime law pertaining to territorial seas, exclusive economic zones and continental shelves are not applicable to it. Thus, prior to the conclusion of a unanimous agreement on the legal regime of the sea, the former treaties are binding upon all littoral states, which provide for free navigation in the Caspian except in the ten-mile coastal zone of each state. But, in a joint meeting of foreign ministers of the littoral states in November 1996 in Turkmenistan, the Russian foreign minister stated that Russia accepts a 45-mile coastal zone and acknowledges the rights of the littoral states to exploit the mineral resources in their respective zones. The new Russian stand significantly changed the situation in favor of Azerbaijan and Kazakhstan. Later, in July 1998, Russia and Kazakhstan signed an agreement to delimit the northern seabed in order to facilitate the development of oil fields in their respective zones. Yet Russia emphasized the common use of the surface waters. The seabed was divided along a modified median line (MML). This was, of course, a major shift in Russia's position, and it created an entirely new legal situation in the Caspian Sea. Iran and Turkmenistan denounced the agreement; they viewed it as a contravention of the existing legal regime of the sea. In June 2001, Russia and Azerbaijan signed a similar agreement. (29)

Finally, in May 2003, Russia, Azerbaijan and Kazakhstan divided the northern 64 percent of the seabed on a median-line basis, receiving 19, 18 and 27 percent of the divided part, respectively. Despite the opposition of Iran and Turkmenistan, the trilateral agreement among Russia, Azerbaijan and Kazakhstan will most probably move forward, owing to the fact that most of the oil and natural gas deposits and large international projects lie within their coastal areas. (30)

One of the key factors that changed Russia's initial position was economic interest, especially concern over Western oil companies' active participation in oil and gas projects in the region, on the one hand, and elimination of the Russian oil companies from the region's prospective future possibilities, on the other. Equally important was the political influence Russia hoped to acquire by active participation in the region's economic and political developments. (31)

Iran believes that the 1921 and 1940 Soviet-Iranian treaties constitute the basis of the legal regime of the Caspian Sea. This regime, it believes, regulates the common management of both the seabed and the waters outside the 10-mile zone according to condominium principles. Thus, all the mineral resources of the sea belong to all the littoral states and should be utilized jointly. On that basis, Iran demands that all coastal states suspend their oil and gas production until a new multilateral agreement is reached. (32)

Indeed, Iran's objection to using the transboundary method of dividing the seabed into national sectors is that, in its 12-13 percent share, situated in the deepest part of the sea, there are few oil and gas resources. Moreover, the depth of the sea makes it more difficult to exploit its limited resources. Therefore, Iran insists on a condominium approach. (33)

In fact, this approach is an economic one. But there is also a political approach: a division of the sea into national sectors, in which each state has full sovereignty. According to the political approach, a Russian naval presence in the Caspian Sea is a potential threat, because the 1921 and 1940 treaties provided for freedom of navigation without any discrimination between military and commercial vessels except within a 10-mile zone along their respective coasts. Russia's new approach, dividing the seabed into national sectors but allowing common use of the surface waters, reinforces this belief. The dual regime indicates Russia's desire to have access to the surface for its navy. Other littoral states do not have navies in the sea while Russia has about 100 warships in its Astarakhan port, part of which has been transferred from the Black Sea fleet via the Volga-Don Canal as a result of a disagreement between Russia and Ukraine. Thus, a legal regime based on a complete division of the sea creates a buffer zone between Iran and Russia, the best option for Iran from a political viewpoint. (34)

If the condominium approach is not acceptable to Azerbaijan, Kazakhstan and Turkmenistan, and the next-best option for Iran from this perspective is dividing the Caspian Sea into national sectors, then on what basis should it be divided? If the sea is divided on the median-line basis, Iran will receive 11 percent, from its western land border with Azerbaijan to its eastern border with Turkmenistan. It was also the basis of the division of the sea by the Soviet Union in 1970. But an 11 percent share of the Caspian is not acceptable to Iran; it proposes the division of the sea on an equal basis (20 percent each). This proposal is not acceptable to the other states, particularly Azerbaijan. (35)

The last example of the challenges of the Caspian to date was the October 2007 summit of the heads of coastal states in Tehran, which ended without major breakthroughs. The only exception was the agreement of all the states on the Framework Convention for the Protection of the Marine Environment of the Caspian Sea, concluded in Tehran in November 2003. Ideally the legal regime of the sea should be determined by unanimous agreement of all littoral states. Until the late 1990s, all consultations were conducted by representatives of concerned states--all unsuccessful. Later negotiations shifted to bilateral levels. Given the contradictory legal opinions on its status, reaching a unanimous agreement is a difficult task. What remains beyond dispute is that its legal regime should be determined by all five littoral states unanimously, after each state's interests are taken into account. (36)

POWER RIVALRY

The disintegration of the Soviet Union in 1991 created, among other things, a second oil rush in the Caspian region. The United States, the EU, Japan, China, India, Turkey, Israel, South Korea, Malaysia, and the international oil giants are now involved in the region's oil industry, either to diversify their energy supplies or to gain from the lucrative oil and gas market of the region. The history of American involvement dates back to the 1920s, when Iranian nationalists invited U.S. oil companies in, so as to counterbalance the Anglo-Soviet oil rivalry in the north of Iran. Iran started negotiations with Standard Oil of New Jersey, which met with fierce Anglo-Soviet opposition. Later, a concession to the Sinclair Consolidated Oil Company in the northern provinces of Iran was again opposed. Germany's invasion of the Soviet Union in June 1941 threatened the Baku oil fields, which would be important for Germany as a source of energy supply during World War II. Despite the Anglo-American cooperation with the Soviet Union against the German invasion, no agreement regarding oil concessions in the

north of Iran was reached. Today, there is again a significant interest in the oil and gas resources of the region, which has emerged as a center of power politics. (16)

In a strategy statement for Central Asia, Daniel Fried, U.S. assistant secretary for Eurasian affairs, testified before the Subcommittee on the Middle East and Central Asia of the House International Relations Committee (October 27, 2005) that the United States pursues three sets of strategic interests in Central Asia: "security, energy and regional economic cooperation; and freedom through reform." He further stated that these interests are pursued "in tandem, because failure in one area will undermine the chance of success in another." In energy and economic cooperation, efforts are made to open this region to global access and vice versa, by investment and by the building of roads and bridges, "essential for revitalizing regional and global trade." The governments of the region are encouraged "to create welcoming environments for foreign trade and investment." (17)

The region, with its huge reserves of oil and natural gas, is a key arena of rivalry between the United States, Russia, Europe, Japan and China. All these major powers, along with transnational corporations, have been seeking alliances, concessions and pipeline routes. This is particularly true in the case of China, with the world's fastest-growing economy. It is expected that China's oil imports from the region will grow between 20 percent and 40 percent by 2010. (39) China's important investments in the region are not limited to the oil and gas industries. These investments will have a great impact on the regional infrastructure, fundamental for the economic development of these countries. (40)

Japan and South Korea are also interested in oil and gas pipelines to diversify the vulnerable sea routes from the Middle East and develop secure continental access to the region's oil and gas resources. Moreover, Japanese corporations and banks are as attracted by the prospect of superprofits from the exploitation of the resources of the region as major U.S. and European transnationals are. (41)

Russia has restructured the Commonwealth of Independent States (CIS) to tighten cooperation among former Soviet republics. It also has sought economic and political links to China and Iran through the Shanghai group of nations, because American and European activities in the Caspian Sea/Central Asia are seen as a threat close to its southern borders. Although the United States, China, Japan, South Korea and Europe have common interests and general aims, they do not have identical goals and priorities. Iran has also made overtures to the states of the region, offering them passage through its territory, but it lacks capital. Therefore, it seeks a big partner like Russia or China in the region. The possibility of an Iranian alliance with either or both of them is disturbing to the United States. (42)

One of the dimensions of power rivalry in the region is the construction of pipelines. As mentioned earlier, pipeline construction will provide the transit states with a variety of financial and political benefits: access to oil and gas for domestic consumption, foreign investment and jobs, transit fees and, more important, leverage over both producer and consumer countries. For many years, several proposed routes have been under consideration. On the one hand, the existing routes were mainly designed to link the republics of the Soviet Union; on the other hand, they are no longer capable of handling the new economic and political dynamics of the region, for several reasons. First, the projected volumes of oil and gas exports will swamp the capacity of the existing Russian network. Second, the network is aimed at the Mediterranean, not the vast Asian market. Third, there are political and security concerns as to whether the Caspian states should remain dependent solely on Russia for their export outlet. Multiple routes can enhance the security of the flow of oil and gas from the region to the international markets. Moreover, multiple pipelines will promote economic competition and eventually reduce the cost of energy to consumers. But in constructing pipelines, economic feasibility has to be taken into account, since smaller economies of scale mean greater expense for each project.

International companies and concerned governments have been engaged in negotiations for several years to determine the priority of each route. The United States is playing a leading role in this process, due to its heavy investment in the region's energy resources. (43) Obviously, pipelines that avoid Russia and Iran would serve U.S. interests. First, this policy reduces Caspian states' dependence on Russia and strengthens their economic and political independence. Second, it would further contain Iran and check its potential influence in the Caspian and Central Asian regions. Finally, the United States is interested in reducing world dependence on the Persian Gulf and insuring the diversity of energy supplies. But, in fact, Iran borders Azerbaijan and Turkmenistan and provides a natural connection from the Caspian Sea and Central Asia to the rest of the world. As the most viable route, Iran aspired to play a leading role in the transportation of the region's oil and gas resources. But a 1995 executive order prohibited U.S. companies from conducting business with Iran. This was followed by the 1996 Iran-Libya Sanctions Act, which penalized non-U.S. companies investing more than \$40 million annually in Iran and Libya. The 1997 sanction further reduced the investment to \$20 million. (44) Consequently, not only is Iran's bargaining position vis-a-vis regional states and major powers weakened; but also the countries of the Caspian region are deprived of the most economically viable route to export their oil and natural gas to world markets. This ultimately leads to higher energy prices for consumer countries. (45)

There are three propositions in favor of pipelines across Iran. First, the Mediterranean is a relatively oversupplied

region; sending the Caspian oil to Europe does not make much sense. Oil demand in OECD Europe is expected to increase by little more than 200,000 b/d over the next 15 years, while Asian demand for oil is expected to grow by 8 million b/d over the same time span. Second, routes through Iran would avoid the congested Turkish Straits. Oil flow through the Bosphorus, already a major chokepoint, ranges from 2.8-3.1 million b/d. Turkey has already raised concerns about possible collisions in the straits, since most Russian oil-export pipelines terminate at the Black Sea port of Novorossiysk. Third, in addition to being one of the shortest routes, the existing reversible pipelines in Iran could be utilized, saving time and money. (46)

Nevertheless, Iran has been successful in initiating low-volume swap deals with Turkmenistan and Kazakhstan. Oil is delivered in tankers to refineries in northern Iran in exchange for the same volume of crude oil to be swapped at Kharg Island in the Persian Gulf after paying transit fees ranging from \$1.50 to \$2.00 per barrel. In 2004, Iran developed its domestic distribution network to increase swap capacity from roughly 50,000 b/d to 150,000 b/d. According to the Iranian deputy minister of oil, further development of the pipeline would increase the capacity to 250,000 b/d, and installation of new pumping stations, would raise it to 500,000 b/d by the end of March 2007. He noted, moreover, that Iran also planned to construct a 250,000 b/d refinery near Neka at the Caspian Sea and Tabriz and Tehran refineries were being developed to refine up to 500,000 b/d of Caspian crude oil. Since 2004, swap levels decreased to 35,000 b/d during the winter of 2004-05 and have now increased to about 147,000 b/d. (47)

Moreover, in December 1997, Iran and Turkmenistan completed the \$190 million Korpezhe-Kurt Kui pipeline, the first natural-gas export pipeline from Central Asia to bypass Russia. The 124-mile pipeline, with an initial capacity of 141 bcf, will reach a peak of 282 bcf per year. Turkmenistan exported 106 bcf and 154 bcf via the pipeline in 2000 and 2001, respectively. According to the terms of the 25-year contract between the two countries, Iran will receive between 177 bcf and 212 bcf of natural gas from Turkmenistan annually, with 35 percent of Turkmen supplies allocated as payment for Iran's contribution to building the pipeline. (48)

To sum up, U.S. oil executives believe that Iran cannot be excluded from the development of the Caspian region's resources. The present U.S. policy towards Iran has a negative impact on the region as a whole. If Iran were free to play its natural role without U.S. restrictions, the development of the oil and gas resources of the region would accelerate, and regional cooperation would contribute to economic prosperity and the security of energy resources. It should be noted that Iran is interested in promoting economic and political stability in the region. A stable region not only would serve the security interests of Iran; prospering Caspian states could provide a large market for non-oil Iranian goods. The troubled relationship between Iran and the United States has even put American oil companies at a disadvantage with their European and Asian competitors. (49)

Iran's apprehension that it is being left out of the regional decision-making process, as well as a desire to check extensive U.S. involvement in the Caspian Sea and Central Asia, may result in incidents similar to the July 2001 military action by Iran. Iranian gunboats chased two BP survey ships from a disputed oil field in the southern Caspian. As a result, BP immediately suspended all activities under its contract with Azerbaijan in the disputed Alborz (Alov-Sharg) oil field. (50)

EXPORT ROUTES

As increasing exploration and development of the Caspian basin leads to more production, the large quantities of oil and natural gas available have to be exported. All the oil and natural gas pipelines in the Caspian region (apart from those in northern Iran) that were completed prior to 1997 were routed through Russia and were designed to link the former republics of the Soviet Union. The major pipeline was the 210,000 b/d Atyrau-Samara pipeline from Kazakhstan to Russia. The infrastructure left after the collapse of the Soviet Union is inadequate, and new pipelines in each direction have been proposed; some have been completed. (51)

Major Oil Pipelines

There are four main oil pipelines: first, Baku-Tbilisi-Ceyhan (BTC) is a 1,040-mile route from Baku, Azerbaijan, via Georgia to the Turkish Mediterranean port of Ceyhan. The pipeline is exporting Azeri and possibly up to 600,000 b/d of Kazakh oil bypassing the Bosphorus Straits. Built by a BP-led consortium, the 1 million b/d BTC was completed in May 2005 (after eight years). The first tanker deliveries began in June 2006 with an average of roughly 210,000 b/d from June-September 2006. The volume was expected to rise to 500,000 b/d by early 2007 and is expected to reach its peak of 1 million b/d between 2008 and 2009. (52) The most expensive route of all, it ended the Russian oil-export monopoly. (53)

Second, a 613-mile route was built from Atasu in northwestern Kazakhstan to Alatau Pass in the Xinjiang Province of China. The \$850 million pipeline, completed in December 2005, exports 200,000 b/d of Kazakh oil to China. When all three stages are completed, the 1,860-mile route will reach Alashankou in China. Chinese demand is expected to grow by more than 4 million b/d by 2020, and this is the first step toward meeting it. (54)

Third, the CPC project connects Kazakh Caspian Sea oil deposits with the Russian Black Sea port of Novorossiysk. It traverses Russia and provides a viable alternative to the Atyaru-Samara pipeline. The CPC expansion would ultimately add 750,000 b/d of oil through the already congested Bosphorus Straits. The first tanker containing CPC oil was loaded at Novorossiysk in October 2001. (55)

Fourth, the Trans-Caspian route connects Aktau in northern Kazakhstan to Baku, Azerbaijan. This 700 km pipeline will be connected to the BTC pipeline, because, on the one hand, volumes from the Azeri-Chirag-Gunashli (ACG) field will not be sufficient to completely fill the BTC when it reaches its maximum capacity; on the other hand, existing Kazakh routes may not have sufficient capacity for expanding oil production. Oil from the Kashagan project will be the primary source of oil for the pipeline when Kashagan comes on line in 2009. The \$4 billion pipeline, expected to become operational by 2010, poses environmental concerns as well. (56) Kazakhstan's National Oil Company, Kazmunaigaz, also has a plan to build a 590-mile oil pipeline from Isgene in the Atyaru area to Port Kuryk, with an oil-loading terminal, by 2010. (57)

Major Gas Pipelines

The South Caucasus Pipeline (SCP, also called the Baku-Tbilisi-Erzurum pipeline) connects to Turkish infrastructure near the Town of Erzurum. The 550-mile, \$1 billion pipeline will run parallel to the BTC oil pipeline for most of its route. It carries natural gas from Azerbaijan's Shah Deniz field and had an initial capacity of 0.8 bcf/d by the first quarter of 2007. It will be expanded to 1.5 bcf/d and eventually to 3 bcf/d. The Central Asia Pipeline (CAC) carries most of the east Caspian natural gas into the Russian natural-gas pipeline system. The capacity of 4.4 bcf/d was expected to increase to 5.2 bcf/d in 2007. Central Asia also has a number of preexisting pipelines, including the Bishkek-Almaty pipeline, for consumers in the region. A proposed Trans-Afghan Pipeline is an additional route for Caspian natural gas to Asia, either south through Iran to the Persian Gulf or southwest to Afghanistan. The Afghan option has been delayed due to security concerns and a lack of international investors; the Iran option is problematic because of the Iran-Libya Sanctions Act. It was noted earlier that Iran and Turkmenistan completed the Korpezh-Kurt Kui pipeline in 1997. (58) Prior to that, the only option for exporting Caspian natural gas was through the Russian natural-gas network. This pipeline can also be expanded to allow Central Asian natural gas to enter the pipeline system en route to European consumers. The existing pipeline through Kazakhstan and Russia has a capacity of 700 bcf per year; by adding more compressors, it can increase by 50 percent. (59)

In April 2006, Russia purchased the Armenian pipeline and a power plant in exchange for fixing domestic Armenian gas prices at half of European levels until 2009. The deal also gives Russia control of the pipeline that runs from Iran into Armenia. Finally, on May 12, 2007, the governments of Russia, Kazakhstan and Turkmenistan announced plans to construct a natural-gas pipeline to carry gas from Turkmenistan through Kazakhstan to Russia. Russia already buys Turkmen gas at below market prices and also effectively controls its natural-gas reserves through the network of pipelines owned by Russian Gazprom. (60)

CONCLUSION

Uncertainty about the legal regime of the Caspian Sea has hindered full development of its natural resources as much as has the rivalry among regional and international powers. As the sea shares the characteristics of both seas and lakes, the dispute has to be resolved by nontraditional agreements worked out among the littoral states. It should be decided unanimously. The uneven distribution of oil and natural-gas reserves of the basin is another important obstacle to the process. Despite quite divergent views of the coastal states regarding the legal regime of the sea, some signs of cooperation are emerging. An agreement on the Framework Convention for the Protection of the Marine Environment of the Caspian Sea was signed in November 2003 in Tehran. The sustainable development of the littoral states as well as Turkey, Georgia, Armenia, Uzbekistan and Kyrgyzstan depends entirely on mutual cooperation. Agreements have been reached in the more sensitive region of the Persian Gulf; after decades of rivalry, joint development of offshore oil and natural-gas resources has been implemented. This could serve as a valuable example for the Caspian Basin. Apart from economic issues, the rivalry among regional and international powers has complicated the situation. The troubled relationship between Iran and the United States must be taken into account. Since one cannot be eliminated by the other, political will based on mutual understanding can help solve the differences and avoid antagonism, which would harm all parties concerned. Time and effort are needed to build understanding after precise calculations of gains and losses. No doubt it will be a painstaking process, but it is not impossible.

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Table 1: Oil Reserves (billion barrels)

Country	Proven Oil Reserves			Total	
	Low	High	Possible	Low	High
Azerbaijan	7		32	39	39
Iran		0.1	15		15.1
Kazakhstan	9		92	101	132
Russia		0.3	7		7.3
Turkmenistan	0.55		38	38.55	39.7

Table 2: Production (thousand barrels per day)

Country	1992	2000	2005	Low		High	
				2010	2010	2010	2010
Azerbaijan	222	309	440	900		1,290	
Iran					N/A		
Kazakhstan	529	718	1,293	1,600		1,800	
Russia	0	0	0		100		
Turkmenistan	110	157	196	165		350	

Source: Caspian Sea Region: Survey of Key Oil and Gas Statistics and Forecasts, July 2006, EIA, www.eia.doe.gov

Table 3: Natural Gas Reserves (trillion cubic feet)

Country	Proven Reserves	Possible Reserves	Total Reserves
Azerbaijan	30	35	65
Iran	0	11	11
Kazakhstan	65	88	153
Russia	N/A	N/A	N/A
Turkmenistan	71	159	230

Table 4: Production (tcf/year)

Country	1992	2000	2005	2010
Azerbaijan	0.28	0.20	0.18	0.7
Iran	--	--	--	--
Kazakhstan	0.29	0.31	0.84	1.24
Russia	--	--	--	--
Turkmenistan	2.02	1.89	2.08	3.50

Source: Caspian Sea Region: Survey of Key Oil and Gas Statistics and forecasts, July 2006, EIA, www.eia.doe.gov