NEW SILK ROAD

Turkmenistan Emerges into the World Of China's Belt and Road Initiative

by Ramtanu Maitra

Jan. 8—Turkmenistan in Central Asia—in isolation by choice since its emergence in 1991 as an independent nation—has begun to emerge from its cocoon and establish active relationships with its neighbors, and a particularly close relationship with China. Its former isolation had resulting in stagnation in almost every sphere of its socio-political economy. This shift was born of the realization that it was necessary to ensure a beneficial life for the coming generations of Turkmenistanis. It was not entirely a result of the change of leadership in 2006, when Gurbanguly Berdimuhamedov became President. A significant part was played, and is being played by China, through its huge Belt and Road Initiative (BRI), intended to engage the Central Asian nations and many more.

Turkmenistan is still in the process of overcoming its isolationism. The government practiced what was called "positive" (or "permanent") neutrality, a UN-recognized status, for almost 20 years as its sole national policy, but has now begun to pursue new initiatives to build a prosperous Turkmenistan.

These initiatives, nonetheless, have largely remained confined within and around the development of its huge gas reserves and the natural gas trade. Although serious security threats within its borders remain, particularly in the South, where it borders on Afghanistan, a developmental awakening process in the immediate vicinity of Turkmenistan is clearly visible: Pakistan—just beyond Afghanistan to the southeast—has become a major potential beneficiary of China's BRI. China has committed more than $51 billion in developing Pakistan's physical infrastructure in connection with the China-Pakistan Economic Corridor (CPEC). Those investments will trigger requirements of energy, and Turkmenistan's vast reserves of natural gas will surely be in high demand to meet those requirements.

Connecting with Neighbors

How will the natural gas get to Pakistan? That question has already been answered. The Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline project, which has been hanging fire for years, would bring to Afghanistan, Pakistan, and India an estimated 90 million standard cubic meters of gas per day from Turkmenistan's Galkynysh gas field in its eastern Mary province. The 1,800 kilometer pipeline will traverse a path almost at right angles to the CPEC—almost 780 kilometers through Afghanistan and about 830 kilometers from west to east through Pakistan, to enter Punjab state, India.

It is easy to see why this project has not yet materialized. For years, the lack of security in the region, Turkmenistan's self-imposed isolation, and the lack of developmental initiatives within Pakistan—perpetuated by its economic weakness and the huge security problem—have kept the project on paper only. In recent

The planned natural gas pipeline, Turkmenistan-Afghanistan-Pakistan-India (TAPI)

months, some baby steps have been taken, but the obstacles continue to overwhelm its execution.

The motivation for Turkmenistan to develop links with neighboring countries is thus clear: It can market its natural gas to China; to Pakistan and India to its Southeast through TAPI; and to the Persian Gulf through Iran. Yet there is another important reason for Turkmenistan to cultivate relations with its neighbors—the problem of the Taliban and Islamic State (Daesh).

Turkmenistan Attentive to SCO

In recent years, activities by the Afghan Taliban along the Afghanistan-Turkmenistan border have caused the Turkmenistan government in Ashgabat to sit up. On the Afghan side, militant groups are seemingly gaining territory:

> For example, the village of Shakh in the Jowzjan province has reportedly fallen to Taliban and Daesh militants, who have institutionalized their position by claiming taxes from the local population. . . .
>
> Problematically for Turkmenistan's government, Afghanistan has a significant Turkmen minority, which accounts for three percent of the country's population. Recently, Afghan Turkmen in the Marchak district along Turkmenistan's border have been desperately appealing to the country's political elites for assistance. The area is surrounded on three sides by the Taliban, which has effectively cut the region off from the central government in Kabul; on the fourth side is the Murghab River, and across it, Turkmenistan.[1]

Radio Free Europe analyst Bruce Pannier reported in July 2016 that Turkmenistan's Foreign Minister, Rashid Meredov, made "a rare and little publicized visit to three northwestern Afghan provinces at the end of June." Meredov's trip was the latest evidence that Turkmen authorities are trying to adjust their policies toward their southern neighbor in light of the breakdown in security in northwestern Afghanistan. In dealing with the latest security threat emerging on its southern border, Turkmenistan will have to seek closer cooperation with the Shanghai Cooperation Organization (SCO) and, in effect, with its neighbors. SCO is led by Russia and China and will soon be joined by India and Pakistan. Although Turkmenistan is not a member of the SCO, President Berdimuhamedov took part in its 15th anniversary Heads of State summit in Tashkent last June as a guest, as he has at earlier summits.

Addressing the session, Berdimuhamedov said,

> Cooperation with the SCO is an important component of the foreign policy course of our country aimed at providing stable and balanced regional processes, active economic and trade partnership, and the creation of conditions for realization of large international infrastructure projects. That is why Turkmenistan considers the development of relations with the SCO as in inherent connection with both the advancing course of bilateral cooperation and with the general direction of its participation in regional processes.[2]

Young Nation, Ancient Cultures

The vast majority of Turkmenistan's 5.5 million people—the smallest of the five Central Asian countries—are Sunni Muslims belonging to the Hanafi school within mainstream Islam. Nestorian Christians (properly called the Church of the East) entered the land of today's Turkmenistan in the fourth century A.D.—as they spread widely throughout Asia—but by the beginning of the fourteenth century, lingering traces of Christianity had been completely replaced by Islam.

What is today Turkmenistan was first delineated as the Turkmen Soviet Socialist Republic at the time of the consolidation of the USSR in the 1920s. Parts of the same territory, in the seventh century A.D. for example, formed parts of Khorasan, Khwarezm, Sogdiana, and Tokharistan.

The region is steeped in history. In this land, Alexander's army and the armies of the Roman, Parthian, Persian, and Arab empires, and of the Mongols under Chinggis Khan, and of Timur the Lame, have passed through or held sway. For centuries, a part of today's

1. Bradley Jardine, "Turkmenistan's Neutrality Causes Friction among the Ethnic Turkmen Population in Afghanistan," Muftah.org, March 29, 2015, http://muftah.org/turkmenistans-neutrality-causes-friction-among-the-ethnic-turkmen-population-in-afghanistan/#.WHRCCa0z-Wou

2. "Turkmenistan Speaks for Expansion of Capacity Building of World Economic Relations," *Turkmenistan: The Golden Age*, June 24, 2016, http://turkmenistan.gov.tm/_eng/?id=6051

Turkmenistan had formed part of the Persian province of Khorasan, and Khorasan had Merv (next to Mary, the modern city) as its capital. With the explosive expansion of Islam, beginning in the seventh century, ancient Merv became one of the world's greatest cities, known as "the Queen of Cities"; it had already been a stop on the Silk Road for centuries. From Merv, caravans went westward to Iran and Turkey, and eastward to China. Its ruins now stand as silent witness to that glorious and eventful past.

North-South rail corridor from Kazakhstan through Turkmenistan to Iran.

Thousands of years of civilization lie behind what is Turkmenistan today, at archaeological sites such as Kunya-Urgench (on the left bank of the Amu Darya), Dekhistan (a city by the Caspian Sea), Merv, and Old Nissa. The last named, Old Nissa, 15 kilometers west of Turkmenistan's capital, Ashgabat, was the capital of the Parthian kings for 600 years, rivaling Rome itself.[3]

The Driver: Belt and Road

Turkmenistan has a serious land problem: Only five percent of the land is arable (cultivable). The Karakum Desert occupies more than 70 percent (the desert sits atop a vast pool of unexplored gas reserves). The arable land per capita is perhaps less than 0.5 hectares (1.2 acres), but in spite of this, much cotton is grown for export.

Turkmenistan's small population and paucity of currently useful land might be expected to act as hindrance to its emergence as a prosperous and economically significant nation. But its location, and China's push to develop connectivity with nations east, west, and south of the Caspian Sea, could make Turkmenistan a very important ingredient in the future Eurasian land-bridge. At the same time, Turkmenistan is "blessed" with not having direct access to the Ferghana Valley, whose fertile land and density of population of various ethnic groups have attracted Islamic extremists who promote sectarian strife, often exploited by Anglo-American policymakers with the intent to undermine both Russia and China.

Major China-Iran Link

The first cargo train from China to Iran, the "Silk Road train," entered Turkmenistan from Kazakhstan and reached Tehran on February 15, 2016, having travelled 10,399 kilometers with dozens of cargo containers. Welcoming the train at the Tehran Railway Station, Iran's Deputy Minister of Roads and Urbanism, Mohsen Pour-Aqaei, said on that occasion, according to *China Daily,* February 16, 2016:

> To revive the Silk Road Economic Belt, the launch of the train is an important move, since about 700 kilometers of the trip has been done per day.... Compared to the sea voyage of the cargo ships from China's Shanghai city to Iran's Bandar Abbas port city, the travel time of the train was 30 days shorter.

The final link in this north-south rail corridor through Kazakhstan, Turkmenistan, and Iran had been officially inaugurated on December 3, 2014, marking the completion of the Turkmen section of the 908 kilometer route Uzen-Serhetyaka-Bereket-Etrek-Gorgan, which includes 120 kilometers in Kazakhstan and 88 kilometers in Iran. The route, agreed in 2007 and under construction since 2009, opens up a direct rail connection between the three countries to the east of the Caspian Sea. Most of the route is 1,520 mm gauge,

3. John D. Grainger, *Rome, Parthia, India: The Violent Emergence of a New World Order, 150-140 BC* (Barnsley, UK: Pen & Sword Books, 2013), "Introduction."

with a break of gauge at the Iranian border. Uzen is connected to Aktau, Kazakhstan, on the Caspian Sea. Aktau is connected by rail to Khorgos on the China-Kazakhstan border.

This route is about 600 kilometers shorter than the more easterly route through Sarakhs, also in Turkmenistan. The new line is expected to facilitate traffic between Central Asia and the Persian Gulf, including shipments of oil and agricultural produce. Large quantities of Kazakh grain are exported to Iran each year.

Galkynysh Gas Field in Turkmenistan.

Natural Gas Hub

Turkmenistan's unique position in Central Asia today centers on its status as a major producer and exporter of natural gas. Turkmenistan exports 44 billion cubic meters (bcm) of the 77 bcm it produces each year. Though Kazakhstan and Uzbekistan are also significant energy producers, Turkmenistan's population of 5.5 million is a much smaller than Kazakhstan's 18 million and Uzbekistan's 30 million, and that reduces its domestic needs and enables a high level of export.

Natural gas from Turkmenistan, Uzbekistan, and Kazakhstan reaches China through the Central Asia-China Gas Pipeline—actually a system of three (and soon four) pipelines. The system starts in the Turkmen-Uzbek border city of Gedaim, runs through Uzbekistan and Kazakhstan, and crosses into China's Xinjiang province at the Chinese-Kazakh border town of Khorgos. The pipeline's length is 1,830 kilometers and its total capacity will reach 55 bcm per year. More than 140 bcm of natural gas was transported to China via the pipeline's A, B, and C lines from late 2009 until March 2016.[4]

China-Turkmenistan Cooperation

The Galkynysh Gas Field project, which will feed gas into Line D, now under construction, is an example of the close relations that have developed between China and Turkmenistan. (Line D, unlike the first three lines, traverses Turkmenistan, Uzbekistan, Tajikistan, and Kyrghyzstan on its way to China.)

The Galkynysh Gas Field, 75 kilometers southeast of Mary, was discovered in 2006 and is considered the second largest gas reserve in the world. It is actually a cluster of gas fields—South Iolotan, Osman, Minara, and Yashlar—estimated to hold more than 14 trillion cubic meters of gas, and is owned by Turkmengaz State Concern, the state-owned national gas company of Turkmenistan. Gas production began in September 2013.

The first phase of development, requiring an investment of $8.5 billion, was funded through loans provided by the China Development Bank (CDB) and revenues of the owner, Turkmengaz. The second phase, now under consideration, will also be funded by the CDB, and is expected to come online in 2018. China is the most successful foreign investor in Turkmenistan and is the only one that has been given access to a major onshore gas field.

The engineering, procurement, construction, and commissioning contracts for the three treatment plants at the Galkynysh gas field were awarded to Petrofac

4. "Gas Supply via Turkmenistan-China Pipeline Increases," *Trend News*, April 23, 2016, which also provides these specifications: Line A and Line B are supplied with 13 bcm per year from the Amu Darya Project in Turkmenistan, and 17 bcm per year from Turkmengaz State Concern. Line C is supplied with 10 bcm, 10 bcm, and 5 bcm per year, respectively, from Turkmenistan, Uzbekistan, and Kazakhstan. Line D, when completed, will receive gas from the Galkynysh Gas Field in Turkmenistan.

($3.4 billion), a consortium of LGI and Hyundai Engineering ($1.48 billion), and China National Petroleum Corporation (CNPC, $3.13 billion). Gulf Oil and Gas FZE won a $1.15 billion engineering, procurement, and construction contract to develop the production wells. A boundary security system and terrestrial trunked radio communication system at the project site were provided by Beijing Satellite Science and Technology (BSST), an affiliate of Tri-Tech.[5]

Developing Scientists, Diversifying Industry

Developments in the country and the region, some anchored in the China-led BRI and some stimulated by it, have opened up a new way forward for Turkmenistan. As the country becomes prosperous, increasing diversification of its economic development and fuller utilization of its manpower will take shape. Since President Berdimuhamedov took power in 2006, he has put special emphasis on education and especially science. He is himself a Ph.D. in medical sciences (Moscow) and had a career as a dentist before being appointed minister of health. In 2008, Richard Stone reported in *Science*,

> Among signs of progress, construction has begun on a $35 million building for Turkmen State's physics and mathematics faculty, and a new campus is in the works for Turkmen State Medical Institute. The country is looking beyond its borders as well, with plans this fall to dispatch 1,500 students to overseas universities, including Columbia University. 'If [students] are off-the-charts good, we should do what we can to overcome any obstacles and get them here,' says Peter Lu, a physicist at Harvard University, who lectured in Turkmenistan in 2005. Foreign institutions can play a critical role in the intellectual revival, starting with the next generation.[6]

To diversify its economy and add value to its abundant natural gas reserves, Turkmenistan has made plans to build four plants to convert natural gas to liquid synthetic fuel or gasoline. Construction of the first, a $1.7 billion plant, was launched in August 2014 in Ahal province in central Turkmenistan, based on a framework agreement between Turkmengaz and a consortium that includes Kawasaki Heavy Industries (Japan) and Rönesans Türkmen (Turkey). It will process 1.8 bcm of natural gas per year and will produce 600,000 tons of gasoline. The plant should be commissioned in 2018.

In April 2016, the Ministry of Oil and Gas announced an agreement for the second plant to be built by a consortium including Turkmengaz, LG International, and Hyundai (South Korea), and Itochu (Japan), to convert 3.7 bcm of natural gas per year into liquid synthetic fuels, also in Ahal province. No costs were disclosed or the start date, but the ministry said that it would produce 1.1 million metric tons per year of diesel and 0.4 million metric tons per year of naphtha.[7]

Some efforts are also afoot to develop industrial and consumer products. Turkmenistan is now working with China to establish modern manufacturing facilities with its eye on import substitution and export. A plant for the production and maintenance of equipment for the oil and gas complex is being planned by Merdana Turkmen, a local company, together with the Chinese company, Pekin Sancuan Sencyuri Teknoloji Ko.Ltd. Among the plans of other Chinese companies are the construction of cellulose production enterprises and a plant to manufacture filters for cars, trucks, and agricultural machines. An agreement has also been reached to establish joint facilities for the production of metal products, gas generators, and granite and marble processing.

Turkmenistan is a producer of cotton and silk, and has now engaged China to help in developing its cashmere production. Cashmere is yarn derived from goat's wool. The Turkmen Oguzabat company and the Qinghai Cashmere Industrial Group have agreed to establish a cashmere production facility in Ashgabat using Turkmenistan's raw materials.[8]

These industries, although still nascent, indicate that Turkmenistan has begun a process with immense

5. "Galkynysh Gas Field, Turkmenistan," hydrocarbons-technology.com, consulted Jan. 8, 2017, http://www.hydrocarbons-technology.com/projects/-galkynysh-gas-field-turkmenistan/

6. Richard Stone, "The End of an Intellectual Dark Age?" *Science*, May 23, 2008.

7. "Turkmenistan—Oil and Natural Gas Refining," Turkmenistan Country Commercial Guide, consulted Jan. 8, 2017, https://www.export.gov/article?id=Turkmenistan-Oil-and-Natural-Gas-Refining

8. Huseyn Hasanov, "Turkmenistan, China Negotiating about JV Establishment," Trend News Agency, March 1, 2016, http://en.trend.az/business/economy/2500810.html

One of the canals feeding the Altyn Asyr artificial lake during construction.

potential, since the country is in a perfect position to utilize its revenue from gas sales to develop its physical infrastructure and manpower.

The Golden Age Water Project

Like all Central Asian nations, Turkmenistan is short of water. The shortage of usable water is not only because the Karakum Desert is such a large part of the country. The discharge of drainage water from irrigation systems into natural depressions over many years has caused underflooding (the rise of shallow groundwater levels), waterlogging, salinization of the soil, and pollution of groundwater over an area of 700,000 hectares (1.73 million acres, 37 percent of the arable land). It has also polluted the vital Amu Darya (Amu River).

To overcome this problem, in 2000 Turkmenistan began to plan a $6 billion project to construct two canals that cross much of the country, to collect the drainage water and discharge it into the Karashor ("black salt marsh") Depression, creating a large, new lake, to be called the Altyn Asyr ("Golden Age Lake"), just south of the point at which the boundaries of Turkmenistan, Uzbekistan, and Kazakhstan meet. The depression, 120 by 30 kilometers (75 by 19 miles), reaches a depth of 28 meters below sea level (92 feet).[9]

"The lake will solve many problems," according to Paltamed Esenov, director of the National Institute for Deserts, Flora, and Fauna in Ashgabat, as reported in *Science* in 2008. Turkmen officials said that the project would reclaim 450,000 hectares of waterlogged agricultural fields and create a habitat for migratory birds and an inland fishery.[10]

Today, the entire system is functioning and expectations for the project are being fulfilled. President Berdimuhamedov was present at the inauguration of the first stage in 2009, and the system is on its way to becoming a show piece for specialists. According to the state news agency in October 2016, "The implementation of the innovative project of construction of 'Altyn Asyr' Turkmen Lake is a significant contribution to the resolving of global problems related to the conservation of the water resources of the planet." And, one should add, the resolving of water problems has extensive social and economic implications.

Now thought is being given to establishing a center in Ashgabat for promoting the technologies used in the project for further projects in the region and worldwide, and especially for restoring the Aral Sea (Kazakhstan, Uzbekistan) and protecting the Caspian Sea.[11]

9. Igor S. Zonn and Andrey G. Kostianoy, "The Turkmen Lake Altyn Asyr," posted on ResearchGate, January 2013. This is a chapter from the book these writers have edited, *The Turkmen Lake Altyn Asyr and Water Resources in Turkmenistan* (Springer, 2014).

10. Richard Stone, "A New Great Lake—or Dead Sea?" by Richard Stone, *Science*, May 23, 2008, http://science.sciencemag.org/content/320/5879/1002.full?rss=1 This source provides details on the two canals: "For about half its length, the 432-kilometer Dashoguz Collector follows the bed of the ancient Uzboy River. The 720-kilometer Great Turkmen Collector starts in the Lebap region in the east and links up with the Dashoguz Collector 75 kilometers upstream of Karashor."

11. "Turkmenistan's Scientific Approach in Resolving Water- Environmental Tasks: Delegation of specialists travel to the Turkmen Lake Altyn Asyr," State News Agency of Turkmenistan, Oct. 2, 2016, http://science.gov.tm/en/news/20161003news_2016-10-03-1/ and "Turkmen Lake: Water Conservation—A key priority of the environmental policy of Turkmenistan," State News Agency of Turkmenistan, Jan. 5, 2015, http://www.turkmenistan.gov.tm/_eng/?id=4376