

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Oil, Geopolitics and War

By

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UNECE Energy Security Forum



CASPIAN LITTORAL STATES



CASPIAN SEA FEATURES

Geographic Attributes:

Characterized as the World's Largest Lake

- Length: 1030 KM**
- Width: 435 KM, Max. to 196 KM, Min.**
- Latitude range: 36.33 North to 47.07 North**
- Longitude range: 45.43 East to 54.20 East**
- Coast line length: 7000 KM**
- Surface area: 386400 KM²**
- Water volume: 78700 KM³**
- Surface level: (-) 26.5 meters below MSL**
- Salinity: Approximately 1/3 of seawater**
- Max. water depth: 1025 meters.**



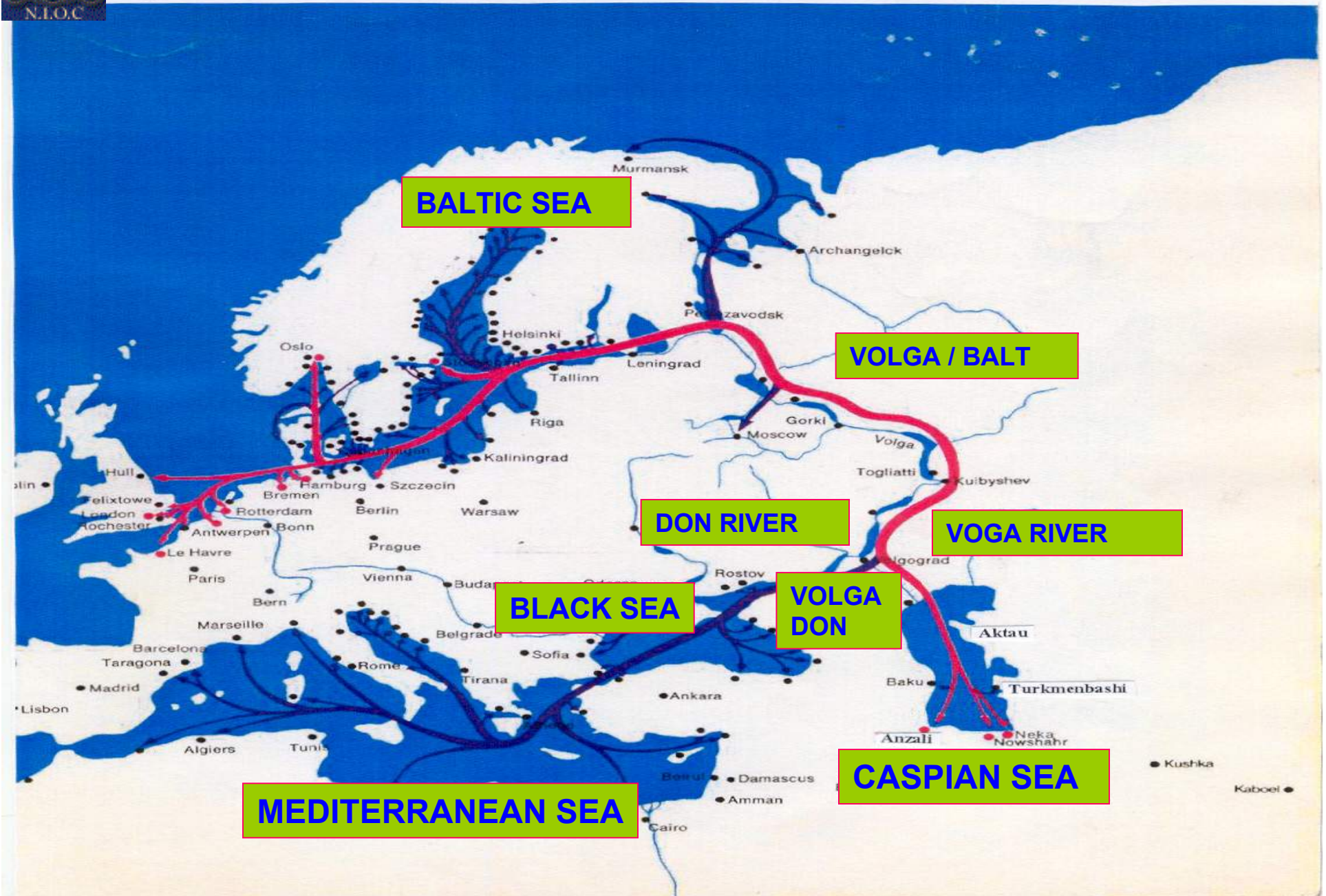
Oceanographic Attributers:

Diverse Met-Ocean + Littoral conditions:

- **High & complex wind, wave, current**
- **Desert, Mountains, Marsh, Lagoons, Ice**
- **Limited number of natural ports.**
- **North Caspian water predominately shallow.**
- **Middle Caspian Derbent Depression near 800 meters.**
- **South Caspian Depression exceeds 1000 meters.**
- **Approximately 130 rivers feed the Caspian Sea.**
- **90% of feed water is from the 5 largest rivers.**
- **No out flow from the Caspian Sea.**
- **Significant features: Volga Delta + Kara-Bogaz Gol lagoon.**



MAP OF CASPIAN INLAND WATERWAYS





Major influences on the energy sector like any other hydrocarbon region in today's world are present such as:

Political conflict. The links between geography and the politics and strategies of nations - "Geopolitics".

Competition for export markets: Oil and Gas pipeline issues.

New oil fields, Investment in infrastructure, International financial liquidity and Competition for capital and equipment



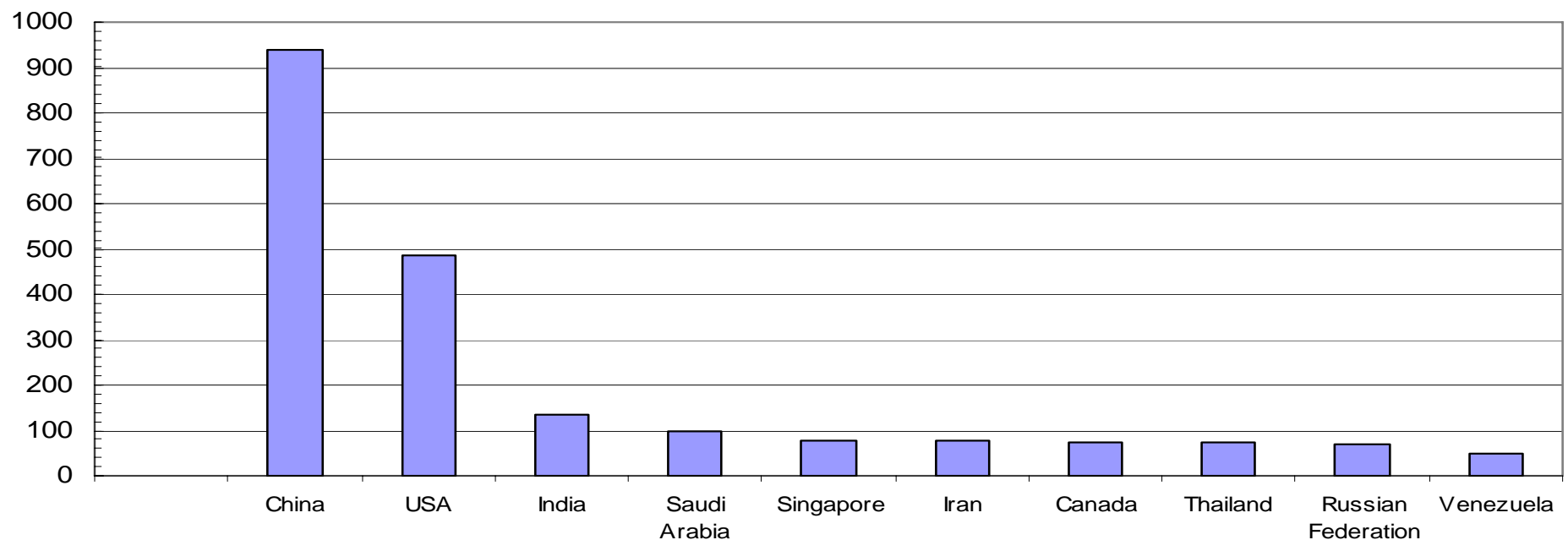
Global Energy Economics:

China and India are driving global energy demand:

- **Average annual growth rate for over the period 1990-2002 was 6%**
- **Forecast demand growth ranges from 3%-5% per annum, to 2020**
- **In 2004, China accounted for one-third of total global incremental**

demand growth of 2.5m barrels per day:

Top ten countries for incremental growth, 2004 (thousand bbld)





- **Current production of crude oil in the Caspian Sea region is roughly 1.8 million barrels per day.**
- **Kazakhstan production accounts for two-third of this figure.**
- **The Caspian Sea is important to world energy market because of its potential to become a major Oil + Natural Gas producer and exporter over the next decade.**
- **Production level are expected to reach 4 million barrels per day by 2015.**



**According to IEA (2005 statement)
the world will require 60% more energy
by 2030 than it used in 2004 if energy
policies remain the same.**

World Reserves:	Total
Oil Reserves (BTns)	161.9
Gas Reserves (TCM)	179.53

Caspian Sea:	Onshore	Offshore	Total
Oil Res.(BTns)	1.861	3.826	5.687
Gas Res.(TCM)	6.848	2.382	9.23



Iran's energy potential:

130 billion barrels of crude oil reserves.

It is now producing more than 4 million barrels per day, but it is capable of boosting its output by another 3 million barrels per day.

Iran has an estimated 27 trillion cubic meters of natural gas about 16 percent of total world reserves

Therefore, Iran stands in a position to play a key role in the global energy security equation.

Today, Iran has a population of more than 70 million. About 1.6 million barrels of crude oil produced in Iran are consumed domestically. Natural gas production has significantly increased, but almost all of it currently is consumed domestically a very significant portion of that is used to generate power.

13 April 2003



Iran's peaceful nuclear program:

Much of the argument over the Iran's peaceful nuclear program revolves around the issue that as Iran has huge oil and gas reserves, it has no need for nuclear power for domestic energy security needs and thus its nuclear program will be used for nuclear weapons.

After the eight years of imposed war at the end of 1980s, the need for electricity generation for reconstruction of the war-damaged economy was evident and as the maximum export of hydrocarbon resources was to be achieved for foreign exchange requirements, the attention was focused on rebuilding the Bushehr nuclear power plant.



**Iran a member of Caspian Sea Littoral States,
founder member of OPEC policy of:**



Energy for Peace - Cooperation.



Energy for Peace - Cooperation.





Iran and EU have since the early 2000 signed a Memorandum of Understanding on Energy Cooperation. Iran is regarded as an important East-West, North-South , and West-East corridor for transportation of energy carriers and will contribute to an integration between the Caspian Sea energy markets with EU and Asia markets.



As a sovereign nation Iran is entitled to make its own sovereign decisions as to how to provide for its own energy needs. And, under Article IV of the nuclear Non-Proliferation Treaty, member states are assured access to the benefits of civilian nuclear energy.

The large oil and gas reserves that Iran possesses do not mean that Iran can use oil and gas at no cost.

In fact the oil and gas that Iran has are almost as expensive as the oil and gas that other countries don't have. To be able to use oil or gas as a feed for an industry such as power generation, Iran has to develop the resources.



NEKA TERMINAL VIEW - CASPIAN SEA

Taking into account the fact that the majority of Iran's oil and gas reserves are in the south and country's population centers are in the north, it makes more sense to export the oil and gas in the south rather than pump it to the north and translate it into eclectic power.

Therefore, it makes economic sense for producers of oil and gas in the Caspian Sea region to look into Iran as a reliable end user market and for Iran to buy oil and gas from the region.





NEKA OIL TERMINAL STORAGE TANKS

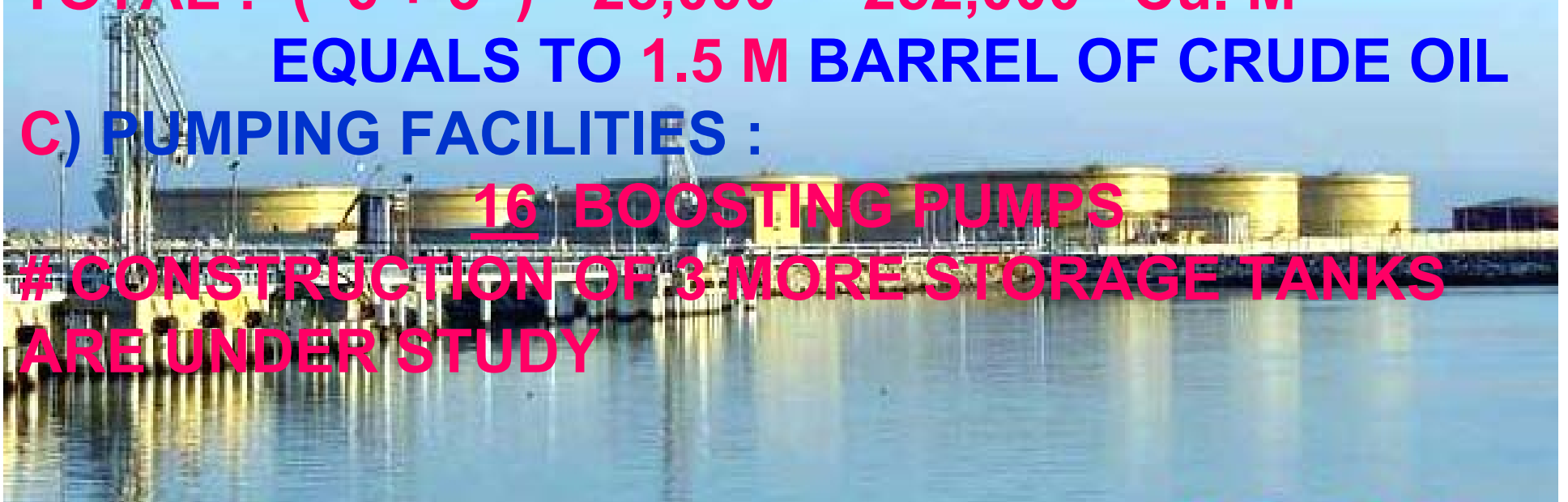
A) STORAGE TANKS : 6 **UNITS**
CAPACITY OF EACH **28,000 Cu. M**

B) BLENDING TANKS : 3 **UNITS**
CAPACITY OF EACH **28,000 Cu. M**

TOTAL : (6 + 3) * 28,000 = 252,000 Cu. M
EQUALS TO 1.5 M BARREL OF CRUDE OIL

C) PUMPING FACILITIES :

16 **BOOSTING PUMPS**
CONSTRUCTION OF 3 MORE STORAGE TANKS
ARE UNDER STUDY





NEKA / TEHRAN PIPELINE ROUTES & PUMP STATIONS

PUMP STATIONS

NEKA

SARI

GHOLPOL

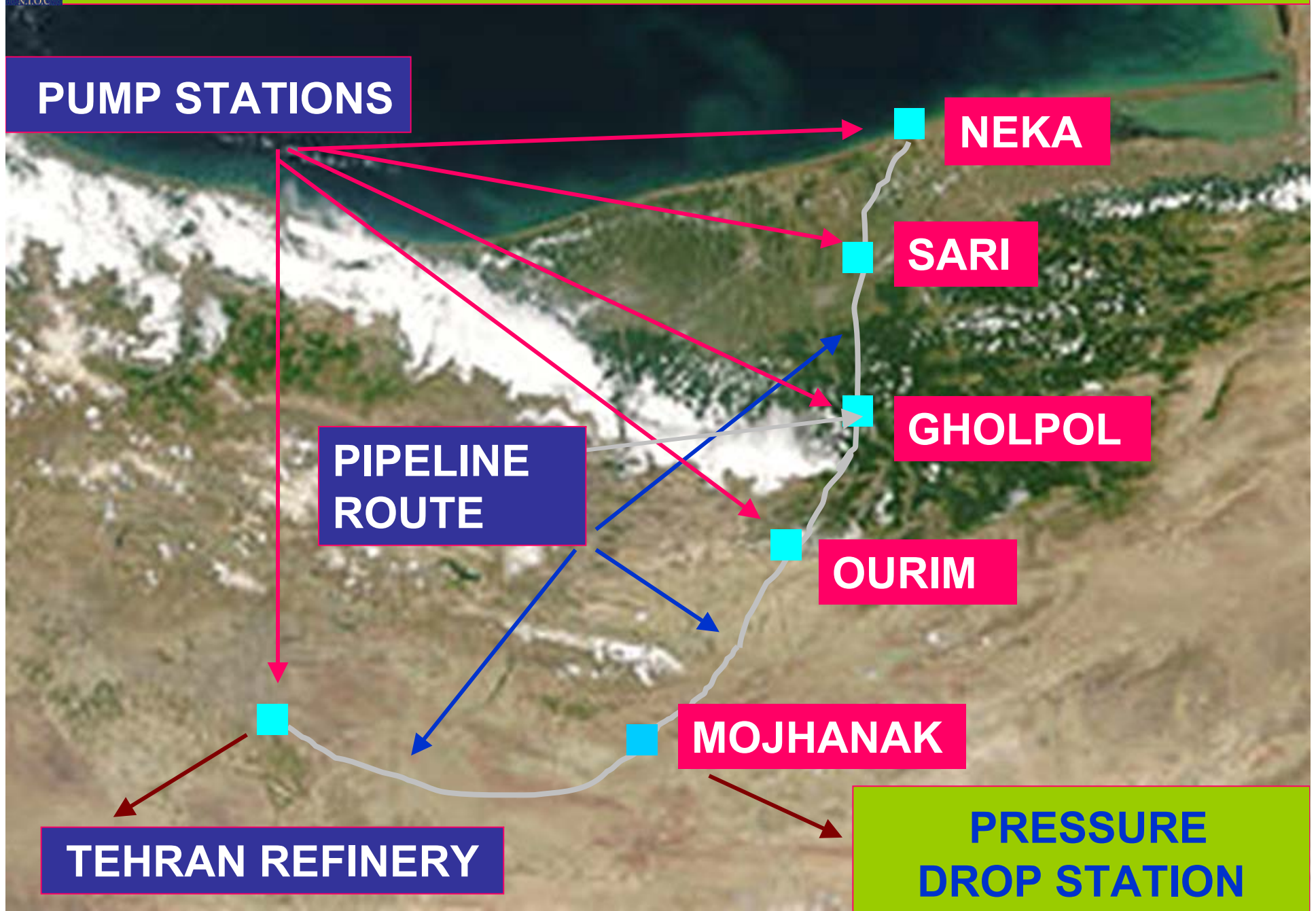
OURIM

MOJHANAK

**PIPELINE
ROUTE**

TEHRAN REFINERY

**PRESSURE
DROP STATION**



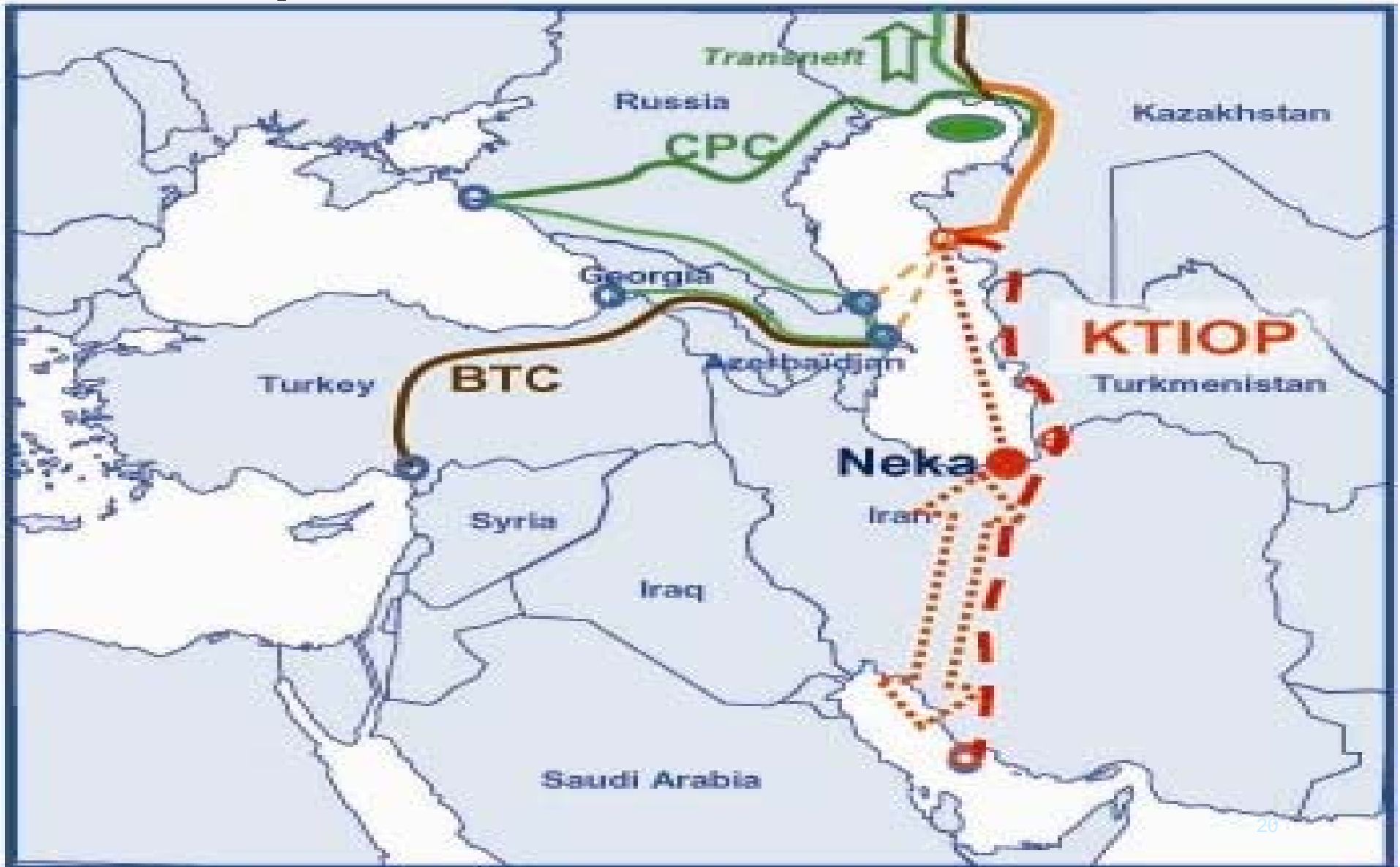


This idea must face many environmental problems as well as uncertainties related to the legal status of this landlocked sea





Through Iran Oil & Gas producers have the option to unlimited destinations.



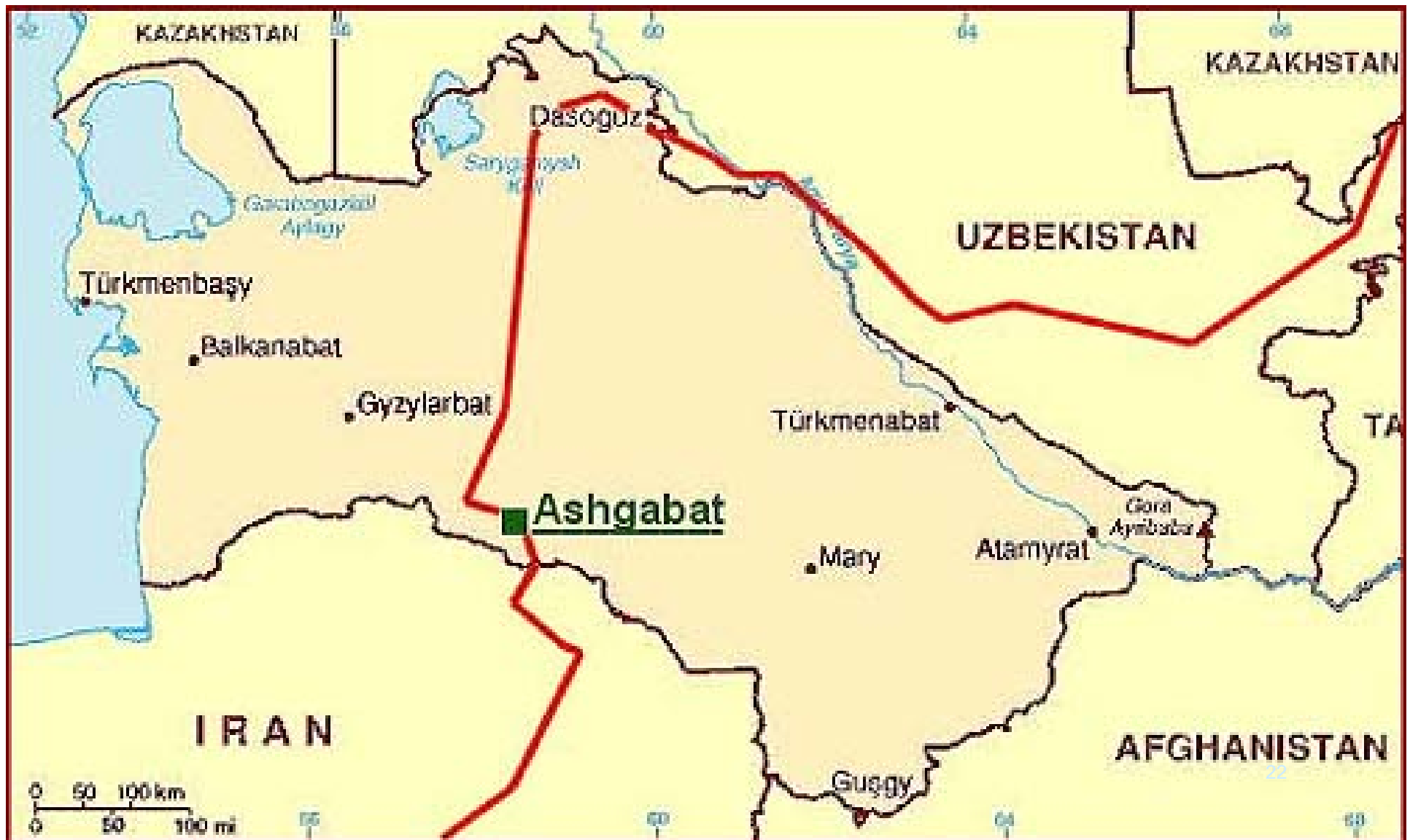


Transportation by ship as well as rail through Iran

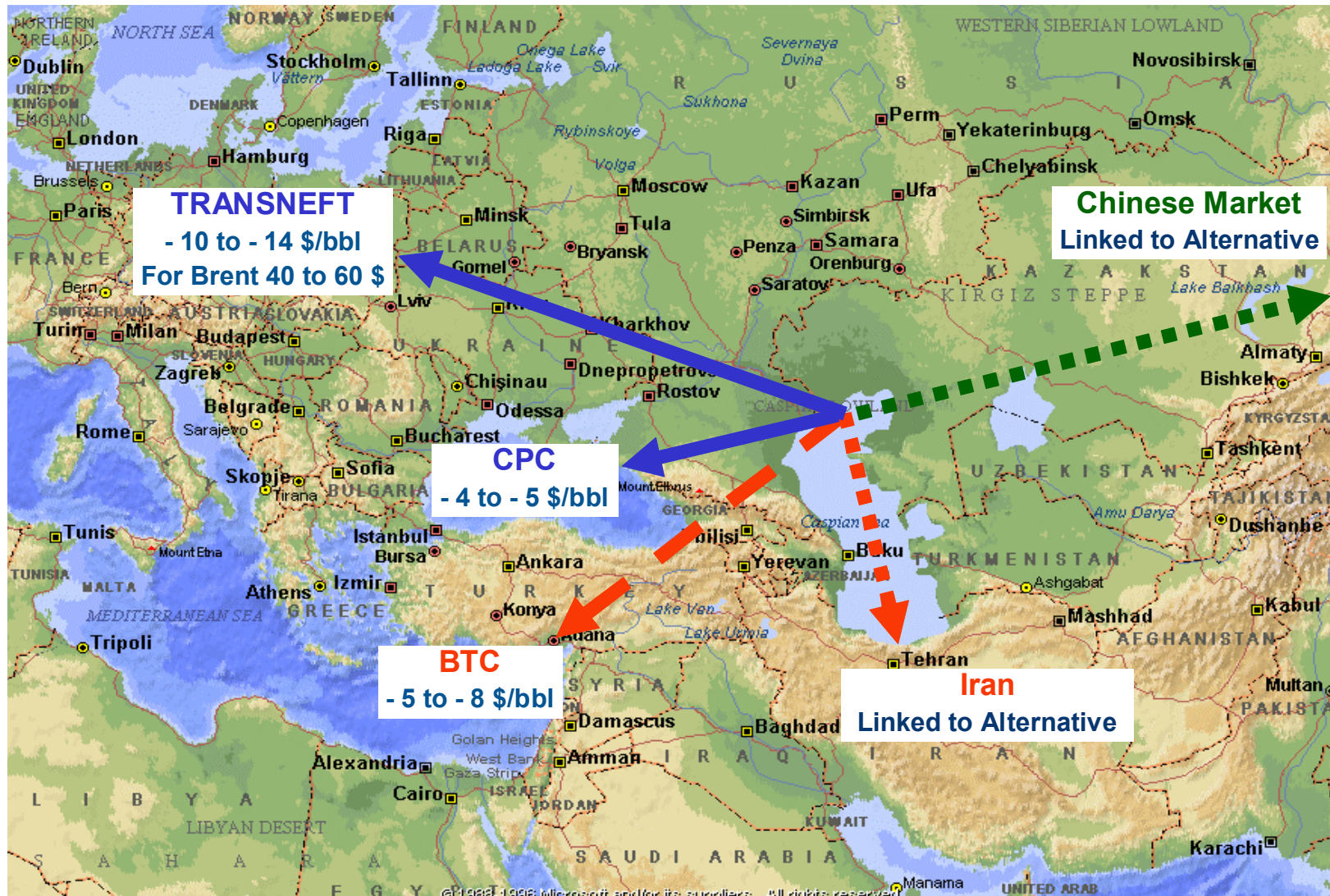




Gas export pipeline to Europe & Asia over Iran territory.



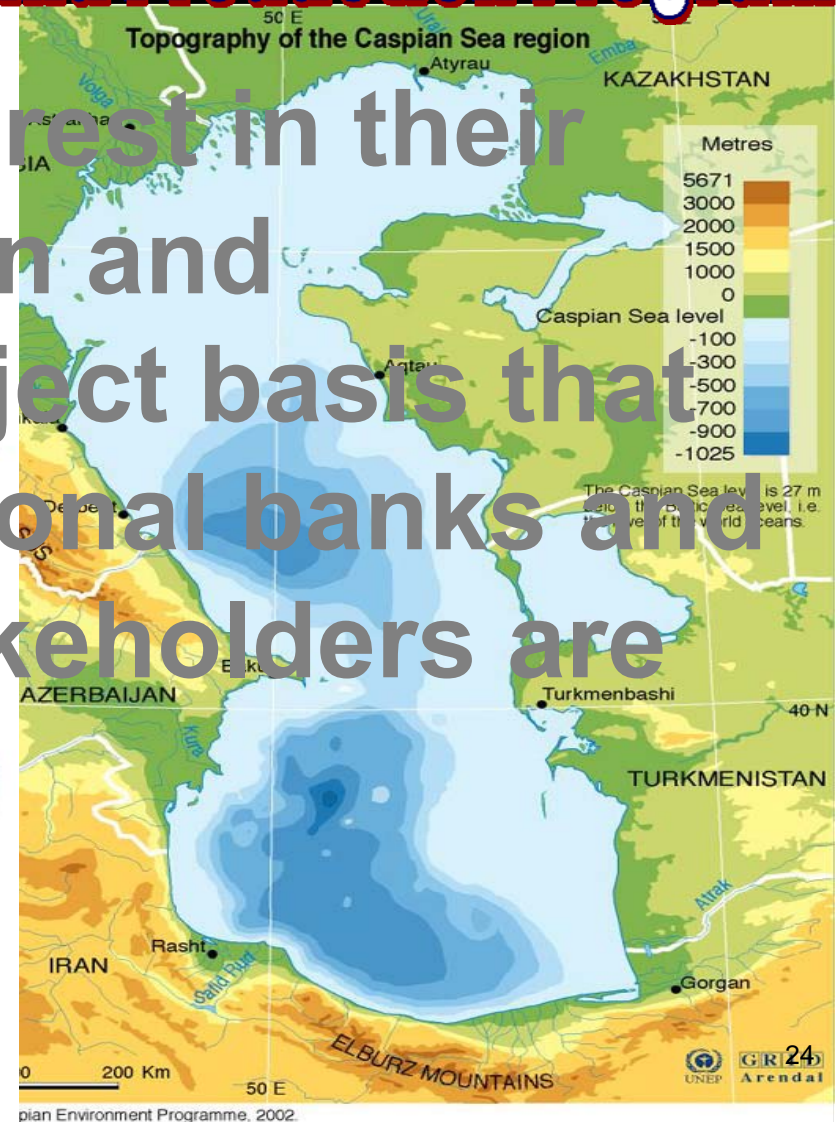
Estimated netbacks for Kashagan crude oil (expressed as Brent - ... \$/bbl)



Conclusions

Southern Caspian Exploration and Production Program

All with genuine interest in their success in the region and financing it on a project basis that will include international banks and other lenders as stakeholders are invited.





Energy demand in Iran between now and 2030 is projected to increase at an average annual rate of about 3 to 5 percent.

To increase Iran oil production from 4.2 million barrels per day in 2006 to 4.5 million barrels per day in 2010 and to around 7 million barrels per day in 2030, the estimated investment need is more than 80 billion US dollars in 2006-2030.

To increase Iran's natural gas production to 570 bcm by 2030, the country needs for cumulative investment of about 100+ billion US dollars over the same period.

Iran has already managed to attract noticeable amount of investment for its oil and gas industry development and in particular is ready to enter joint ventures for developing the Caspian Sea hydrocarbon resources.



US political pressure on Iran is fundamentally driven by its desire to control hydrocarbon resources of the Middle East and Caspian Sea region, as it was proved by the 2003 invasion of Iraq.

So, while publicly focusing and putting pressure on Iran's peace full nuclear program key US administration figures are thinking in geopolitical terms about Iran's role in the global energy equation and its vast hydrocarbon resources. As it was the case with Iraq and its current objective in the Caspian region.

In this regard let us emphasize that the New Name of the Great Game is cooperation in all energy fields and on a fair basis.

THANK YOU

Brief biography of Mr. M. Khaghani



Mr. Mahmood Khaghani is Director General for Caspian Sea and CIS Oil and Gas Affairs at the Deputy Petroleum Minister for International Affairs of the I.R. Iran, Ministry of Petroleum.

Mr. Khaghani is a graduate of Surrey University in the UK with in Energy Engineering. He has over 27 years of services in Iran's Petroleum Industry. He also held the position of the Director for Energy, Minerals and Environment at the Secretariat of the Economic Cooperation Organization (ECO) during 1996- 2000. He has participated and presented papers in many international conferences and seminars.

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