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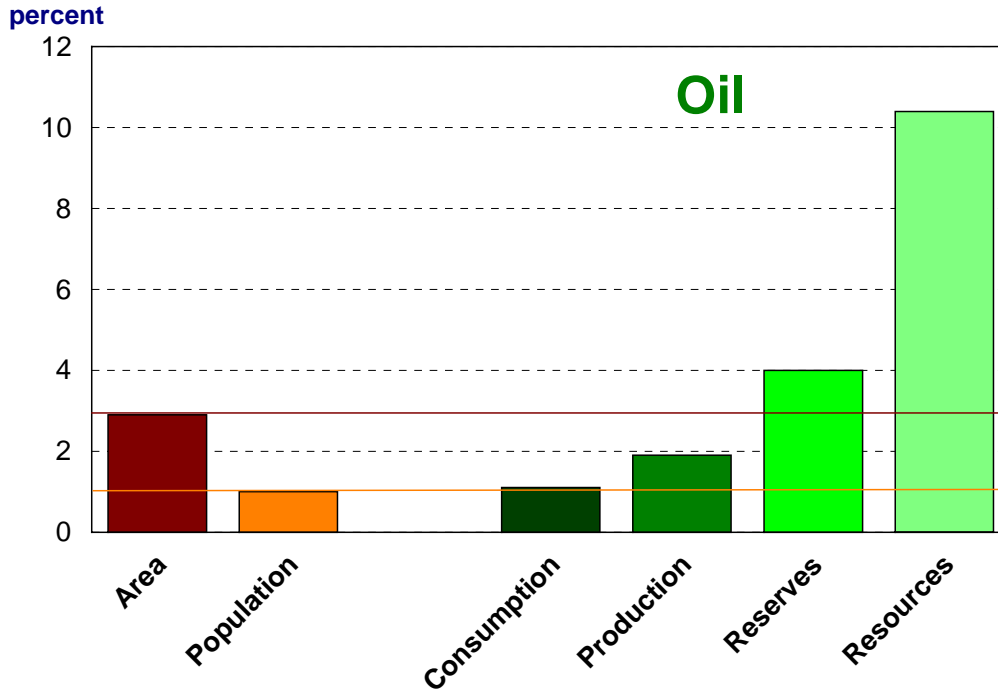
## **The Caspian Region – Source for Oil Supply to Europe and Asia**

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### **Introduction**

The Caspian Region is one of the oldest oil producing regions of the world. At the beginning of the 20<sup>th</sup> century Azerbaijan was the top oil producer. After the disintegration of the Soviet Union in 1991 and the emergence of a series of sovereign states out of former Soviet Republics, the "Caspian Region" moved more strongly into the focus of international political and economic interest due to the exposed strategic position of this region and its huge hydrocarbon resource potential. This potential is quite significant and could play an important role in the future oil supply to European and Asian markets.

Caspian region in current understanding comprises the littoral states of the Caspian Sea and Uzbekistan. Seen in a global framework, the hydrocarbon reserves and production of these countries are relevant (see fig. 1). Their combined share of world production of oil lies at 2 %, of world reserves at 4 %, resources at 10 %; consumption is only 1 %.

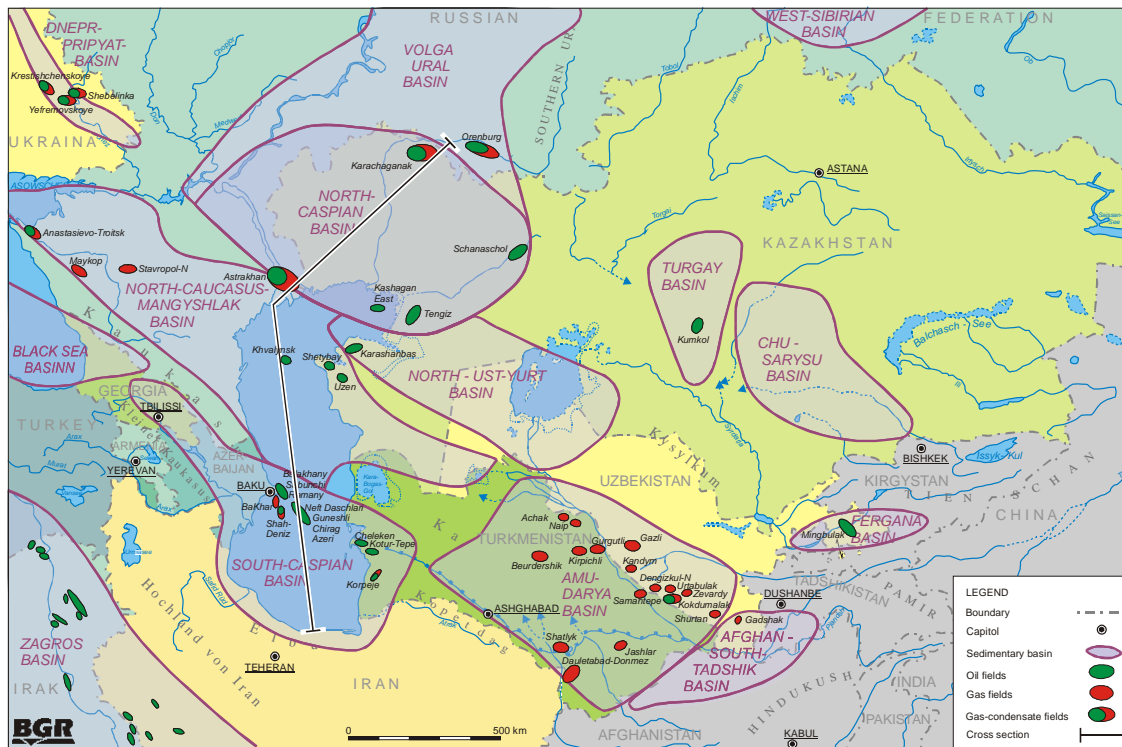


**Fig. 1: Caspian Region – share of world**

**Hydrocarbon related basins and hydrocarbon fields**

The Caspian Region obtains several important hydrocarbon basins of different age and tectonic setting (see fig. 2).

There are several giant oil and gas-condensate fields in Caspian countries (see fig 1) and some supergiants (Astrakhan, Karachaganak, Tengiz, and the new discovered Kashagan and Shah Deniz fields). Exploration in the deeper offshore areas in the Southern Caspian and in the shallow waters in the Northern Caspian began only in the last few years. There were some important discoveries.



**Fig. 2: Hydrocarbon-basins and -fields (giants with reserves > 68 Mio. toe) in the Caspian Region**

### Hydrocarbon potential

According to BGR (1998), updated to mid-year 2000 the Estimated Ultimate Recovery (EUR) of crude oil and condensate for Caspian countries (excluding Iran) exceeds about 18 billion tons, the common reserves of oil about 6 billion tons. In 2000 the Caspian countries produced 69.4 million tons of crude oil and condensate; the cumulative production is 2,790 million tons of oil. The hydrocarbon resources are estimated at 9,200 million tons of crude oil and condensate. The oil potential is about twice of the North Sea potential but somewhat smaller than Iran's potential.

### Hydrocarbon production

Development of oil production in the main Caspian countries since 1950 and projection to 2020 are shown in fig. 3. There are 2 dominating oil producers: Kazakhstan and Azerbaijan. In 1900 Azerbaijan was the leading oil producer in the world.

### Export potential and future markets

The export potential for oil is high due to the low population in most of the Caspian countries. There are markets in Europe and East-/South-East Asia. According to IEA (1998) the export potential for oil could exceed 75-115 million tons in 2020 and 150-180 million tons in 2020 with Kazakhstan and Azerbaijan as dominating countries. Main markets for Caspian oil will be Europe and Asia (see fig. 4)

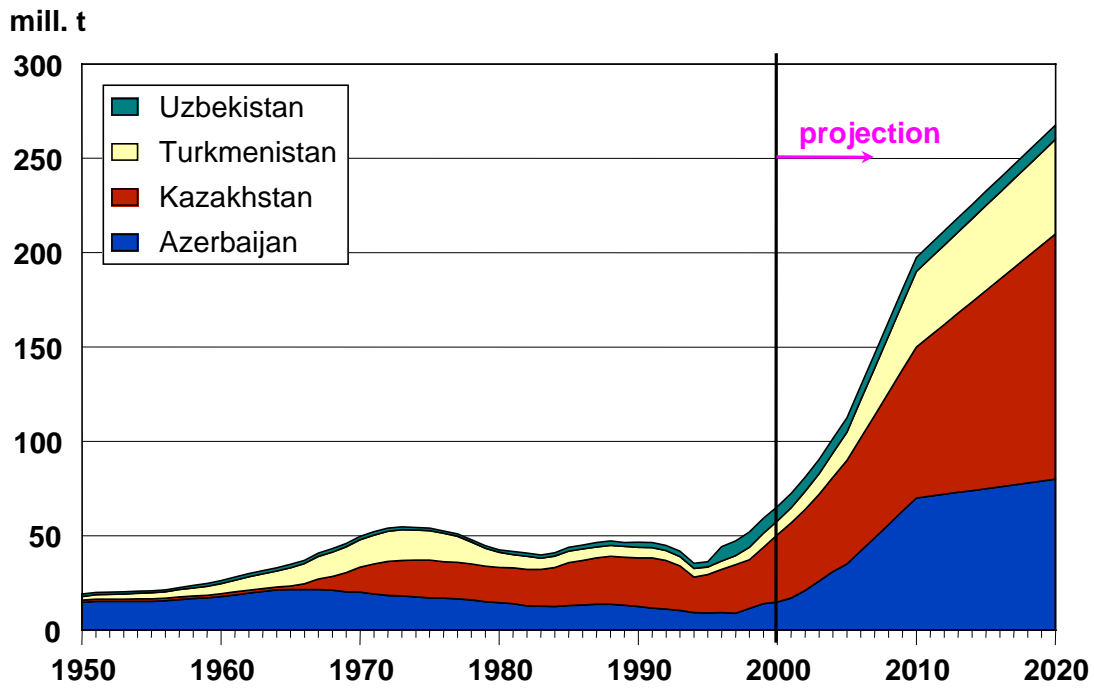


Fig. 3: Development of oil production since 1950 and outlook to 2020

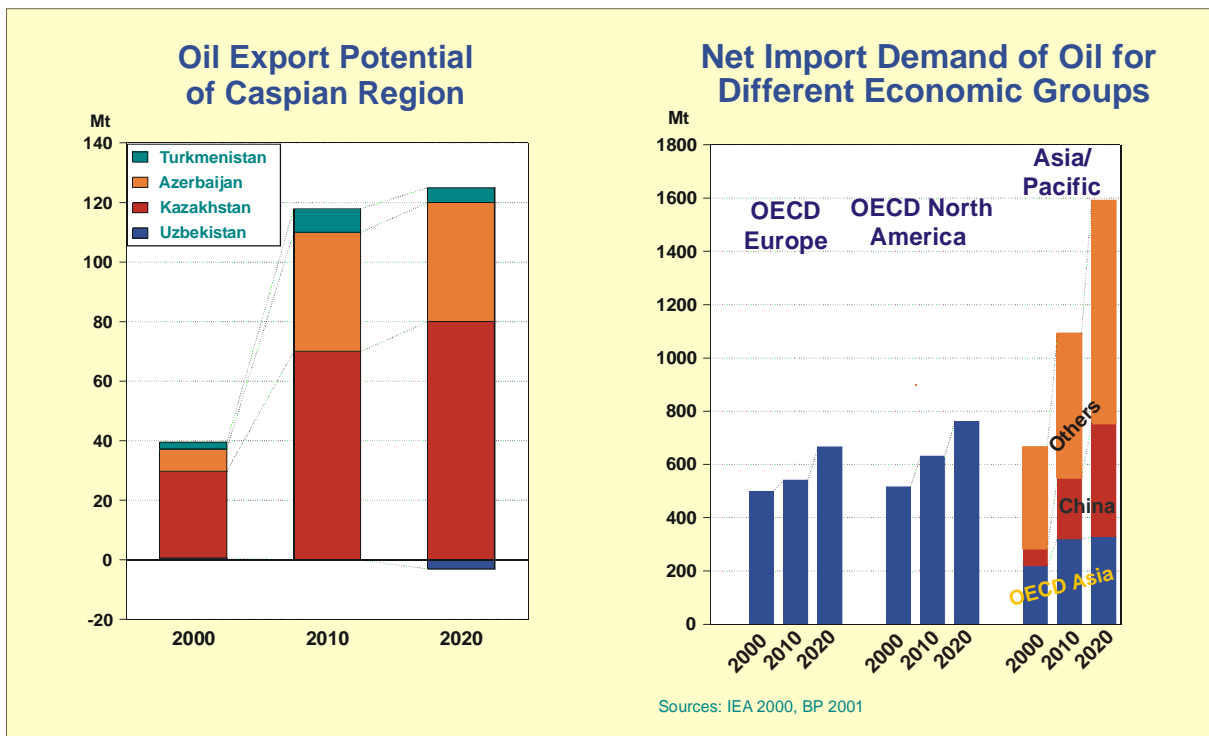


Fig. 4: Oil export potential of Caspian Region and demand for net oil imports in 2000, 2010 and 2020

## Pipeline network

A good developed oil pipeline network to European markets exists mainly through Russia with limited throughput. Lately a pipeline route bypassing Russia was completed from Baku to Supsa on the Georgian Black Sea coast for the transportation of early Caspian oil. In fall 2001 the CPC pipeline went onstream. There are several pipeline projects for the future (see fig. 5).

There are five general directions for pipeline routes:

- to west (Turkey – Europe) via Russia, Georgia or Iran,
- to south (Iran – Persian Gulf),
- to south-east (Pakistan – India? via Afghanistan),
- to east (China – Japan) and
- to north-west (Europe via Russia).

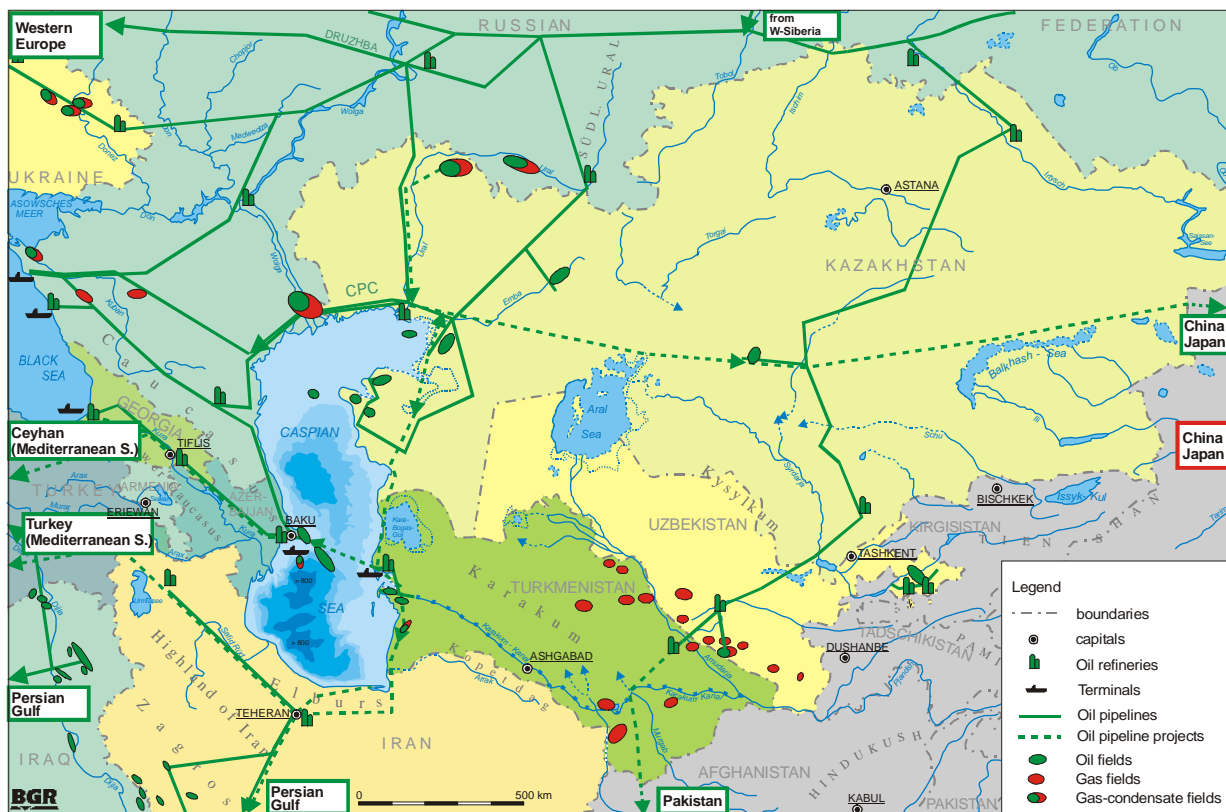


Fig. 5: Oil Pipeline network and refineries in the Caspian region

### **Conclusions**

- The hydrocarbon potential of the Caspian region is important.
- Markets for Caspian oil are Europe and Asia and the Caspian countries could play a major role on their supply.
- Exploration and development of the hydrocarbon potential needs enormous investments.
- The future oil supply depends on a number of factors, e.g. political stability, economic conditions, energy price level as well as the access to international markets.

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