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### WILL THE POLITICAL CRISIS IN EGYPT THREATEN SEA TRANSPORT?

*The Suez Canal which was built due to the reduction of the transit distance between the North Atlantic and the Indian Ocean lies on one of the most important sea routes in the world. It has been rebuilt for several times just as ships have grown in size and capacity over the years. Suezmax ships are the maximum-sized tankers or container ships which can sail through the canal. Their deadweight is from 125 000 to 240 000 tons. Since its opening in 1869 it has been closed twice due to two war conflicts (the Suez Crisis and the Six-Day War). The closures influenced the direction of transport flows in sea transport and the size and capacity of ships.*

### OHROZÍ POLITICKÁ KRÍZA V EGYPTE NÁMORNÚ PLAVBU?

Suezský prieplav, ktorý bol postavený kvôli skráteniu prepravných vzdialeností medzi severným Atlantikom a Indickým oceánom leží na jednej z najdôležitejších prepravných trás sveta. Prieplav bol prestavaný niekoľko krát, tak ako námorné lode zväčšovali svoje parametre a prepravnú kapacitu v priebehu rokov. Ich hrubá nosnosť je od 125 tis. do 240 tis. ton. Od svojho otvorenia v roku 1869 bol dvakrát uzavretý kvôli dvom vojenským konfliktom (Suezská kríza a Šesťdňová vojna). Tieto uzavretia vplývali na zmenu smerovania prepravných prúdov v námornej doprave, veľkosť a kapacitu námorných lodí.

### 1. INTRODUCTION

The Suez Canal lies on one of the most important sea routes in the world. The canal which links the Mediterranean Sea at Port Said with the Red Sea at Suez provides a shorter route between the North Atlantic and the Indian Ocean than the alternative route round the Cape of Good Hope. In fact, it reduces the transit distance from Rotterdam to Mumbai by 42 %, and to Singapore by around 30 % (see Table 1) [1].

*Table 1 Distances saved by using the Suez Canal (miles)*

	<i>By Cape</i>	<i>By Canal</i>	<i>Saving</i>
<b>Rotterdam to:</b>			
Mumbai	10 800	6 300	42 %
Kuwait	11 300	6 500	42 %
Melbourne	12 200	11 000	10 %

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Calcutta	11 700	7 900	32 %
Singapore	11 800	8 300	30 %
<i>Marseilles to:</i>			
Mumbai	10 400	4 600	56 %
Melbourne	11 900	9 400	21 %
<i>New Your to:</i>			
Mumbai	11 800	8 200	31%
Singapore	12 500	10 200	18 %
Ras Tanura	11765	9 543	19 %

[1]

It is situated in the Northeast of Egypt and separates Africa from The Sinai Peninsula which belongs to Asia. The Canal is about 193 kilometres long. It does not have any lock chambers due to minimum sea level between the Mediterranean and the Red Sea. It consists of navigation canals and three lakes: Lake Timsah, Great Bitter Lake (it divides the Suez Canal into The Northern and Southern part) and Small Bitter Lake.

It was opened in the operation in November 1869 after the 10 years of the construction. Before its opening ships which had carried cargo between Europe and Asia had had to navigate round the Cape of Good Hope or cargo had been unloaded on the coast of the Mediterranean Sea and transported by land to the coast of the Red Sea, where, loaded again, it had been prepared for further sea transportation [2], [3].

## 2. The Suez Canal

### 2.1 The Construction of the Suez Canal

The Suez Canal is not the first canal which has been built in this area. The ancient Egyptians built the canal which connected the Red Sea with the Nile Delta. Unfortunately, the canal disappeared because it was blocked by sediments, especially in the Nile Delta.

At the end of the 18<sup>th</sup> century Napoleon's engineers made a project of the canal which would connect these seas. The project was not realised because of engineers' mistake. They thought there was a difference in sea levels (about 10 metres) between the Mediterranean and the Red Sea.

The actual state of the Suez Canal (see Fig.1) is associated with the French engineer and diplomat Ferdinand de Lesseps and the Suez Canal Organisation. After de Lesseps had received a concession, the construction of the canal was started in 1859. The excavation works took 10 years. In the first phase three artificial lakes were built (Lake Timsah, Great Bitter Lake and Small Bitter Lake). In the second phase the parts of the canal were built. It was opened on 17<sup>th</sup> November 1869. Its budget was overdrawn more than twice, about 20 000 workers died because of bad work conditions and illnesses.

At that time the canal was 164 km long and 8 (26 feet) deep. Its width was 22 metres (72 feet) at the bottom, from 61 to 91,5 metres (200 and 300 feet) at the surface [2], [3].



Fig. 1 The Suez Canal [2]

Just as ships have grown in size and capacity since 1869 the canal has been rebuilt for several times. Nowadays, the Suez Canal is 193,3 km long. The present depth of the canal is 24 metres, the width at the surface is between 300 and 365 metres, at the depth of 11 metres is between 205 and 225 metres. Maximum draught of ships is 66 feet (20,1 metres) and maximum tonnage (deadweight) is 240 000 tons [3], [4].

The Suez Canal Authority is the authority which is responsible for management, operation, usage, maintenance and development of the Canal. It was established in July 1956 after the canal had been nationalised by the President of Egypt Naser.

## 2.2 Traffic System of the Suez Canal

Navigation starts at Port Said, the city situated on the coast of the Mediterranean Sea, and it takes vessels from 12 to 16 hours to get to the final point. The route follows Lake Timsah, Great Bitter Lake and Small Bitter Lake ending in Suez. Three convoys of ships pass through the canal every day, two southbound against one northbound. Pilotage is compulsory and speed limits vary from 11 km/h to 16 km/h depending on the category and tonnage of ships. The Suez Canal has been doubled in four parts in the length of 80,5 km, so it allows the transit of ships in both directions. The capacity of the canal is about 76 ships per day [3], [4].

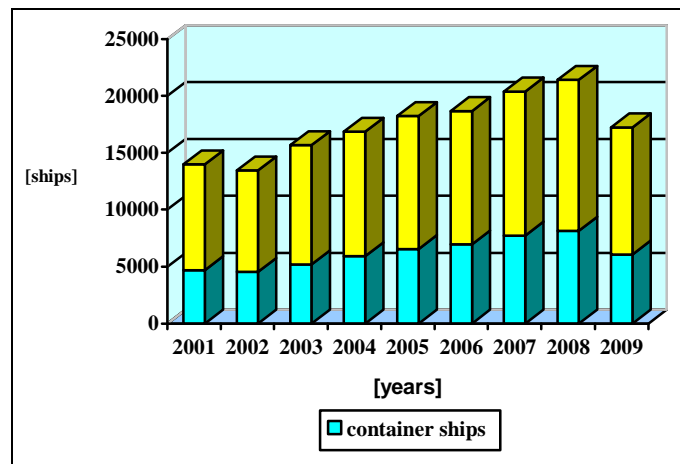


Fig.2. Transit through the Suez Canal between 2001 and 2009 [3], [4]

The transit through the Suez Canal rises per year (Fig. 2). However, in 2009 there was a decrease by 19,6 per cent comparing to the year before due to The Global Financial Crises. 17 228 ships sailed through the canal (of which 6 080 vessels were container ship). They carried 559, 2 million tons of cargo which made a decrease by 22,7 per cent. In 2009 about 8 % of the world seaborne trade passed through the Suez Canal [3], [4].

The canal is especially used by tankers which carry petroleum from the Persian Gulf to Central and Western Europe and container ships transporting containers between Europe and South East Asia.

## 2.3 Suezmax Ships

The term Suezmax is used for the largest ships which can sail through the Suez Canal. These ships are particularly tankers which carry petroleum from The Near East to Europe. Their deadweight is between 125 000 tons and 240 000 tons (the average value is about 150 000 tons) and their maximum width is 46 metres.

The limitations for ships sailing through the canal are:

- draft, stating that ships with the draft of more than 20,1 metres (66 feet) cannot sail through the canal [3],

- air draft, that is the distance from the water line to the highest point of the vessel. In this case it cannot exceed 70 metres because of the Suez Canal Bridge (Fig.3).



Fig.3. Suez Canal Bridge

[[http://www.mol.co.jp/opensea/0604image/0604\\_gss-09d.jpg](http://www.mol.co.jp/opensea/0604image/0604_gss-09d.jpg)]

#### 2.4 The Closing of the Suez Canal

Since its opening in 1869 the Suez Canal has been closed twice due to two war conflicts (the Suez Crisis and the Six-Day War).

The Suez Crisis started in July 1956 after the Egyptian president Nasser decided to nationalize the Suez Canal which had been under the control of the Suez Canal Company. The stakeholders of the Company came mainly from Great Britain and France. Great Britain and France were afraid of losing the political control over the Near East and the profit from the transit through the Suez Canal and (with the help of Israel) they decided to attack Egypt. The invasion started on 29<sup>th</sup> October 1956. The USA did not agree with the invasion and made Great Britain and France retreat because they feared that Egypt would support the Soviet Union. As a result of the conflict, the canal was closed for six months and it was opened again in April 1957.

Another conflict broke out in June 1967. It was called The Six Day War and started between Israel and three Arabic states (Egypt, Jordan and Syria). During 6 days the Arabic countries were defeated. As the consequence of the loss, Egypt lost control over the Sinai Peninsula and the territory of Gaza and closed the Suez Canal until 1975. Finally, the Canal became the border between Israel and Egypt.

During the closings tankers had to sail around the Cape of Good Hope. Shipyards started to build super tankers. Their displacement increased up to 500 000 tons at the draft of 30 metres. After the canal was opened these tankers could not navigate through it because of their draft.

### 2.5 Present Political Crises in Egypt

Over the last days the whole world has witnessed the political crises in Egypt which were caused by big social differences in the Egyptian society. The Egyptian president Mubarak who became the president in 1981 resigned on 11<sup>th</sup> February 2011. He has been accused of the bad economic and social situation in the country (denial of human rights, lack of effective health care and education system). Factually, most Egyptians live below the poverty line and 40 percent of them live on 2 dollars a day or even less.

Politicians and economists are afraid of closing the Suez Canal as it has already happened twice. If the Suez Canal is closed, navigation of ships will be extended by a few weeks that will influence the transport of cargo in containers and the freight rates per TEU.

### 3. CONCLUSION

The Suez Canal which links the Mediterranean Sea with the Red Sea was built due to saving of the transit time between the North Atlantic and the Indian Ocean. It is the longest canal without lock chambers in the world. Tens of container ships, tankers and passenger ships sail through it every day. Since its opening it has been closed twice due to two war conflicts. The closings influenced sea transport negatively. Transport time of containers was extended, shipyards started to build larger tankers (supertankers) with the deadweight of 500 000 tons.

### 4. REFERENCES

- [1] STOPFORD, M.: Maritime Economics. 3rd edition, Routledge, OXON 2009
- [2] <http://www.britannica.com/EBchecked/topic/571673/Suez-Canal>, 10.02. 2011
- [3] <http://www.suezcanal.gov.eg/>, 10. 02. 2011
- [4] <http://www.emdb.gov.eg/english/default.aspx#>, 10. 02. 2011
- [5] BRANCH, A.: Elements of Shipping. 8<sup>th</sup> edition, Routledge, OXON 2007
- [6] DÁVID, A. – HAMPL, M.: Sea Transport and the Suez Canal. TRANSCOM 2009, section 1, EDIS, Žilina 2009, 51 – 54 p., ISBN 978-80-554-0027-3.
- [7] HRIVNÁK, M.: Economics of network industries, Tribun EU, Brno 2010, 221 p., ISBN 978-80-7399-135-7.
- [8] This article was published under the project VEGA MŠ SR 1/0614/10 „A Model of Inland Port as the Transport Hub on the Waterway and its Transformation into the Multimodal Transport Logistics Centre“, duration: 2010 – 2011.