

## **CANAL ISTANBUL CHALLENGES AND OPPORTUNITIES AND THEIR RELATIONSHIP TO THE SECURITY**

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### **Abstract**

Canals are built for economic enhancement through transportation improvement. Canals become nodes not only of enormous financial interests, but of political and security importance. Many canals, like Panama Canal and Suez Canal have been a reason for political and military confrontation. This is the reason planning process of a canal to take in consideration political and security effects in addition to economic reasons for its existence. Canals security challenges originate from their 'choke points' characteristics. Canals are of vital importance to the global economy because they are critical elements of sea lines of communications (SLOCs) and link seas and oceans, providing shorter, cheaper, and safe maritime trade. The maritime security requires control of these choke points. Position and capabilities of a canal specify its importance for the national, regional, and the global policy and security. The Eastern Roman Empire, The Ottoman Empire and its successor Republic of Turkey have defended for centuries the Black Sea straits zone from raids and attempts to take it away with force. Additional waterway in straits area will increase security importance of the area, and will heighten the security importance of the straits. The link between Black Sea and the Mediterranean is of great importance for Europe, Asia, North Africa, North Atlantic Treaty Organization, and the European Union. This brings the project for canal between the Black Sea and the Sea of Marmara to a vital position for many countries. Canal Istanbul project is scheduled to become operational in 2023. The canal may bring not only additional waterway and prosperity, but to originate security challenges, also. They will range over defence, general security and order, political, and environmental domains. The published information aroused discussions about Canal Istanbul's affect on local nature and people in Turkey, its impact on international maritime traffic, and possibility to 'surround' the Convention Regarding the Regime of the Straits signed at Montreux, July 20th, 1936. Defence and protection review for Canal Istanbul is included in this article, along with proposals. Important part of the article is the overview and comparison between Montreux Convention and the United Nations Convention on the Law of the Sea.

**Keywords:** Canal Istanbul, Black Sea, strait, security, maritime, Montreux Convention.

## **1. INTRODUCTION**

The first month of 2018 was marked by the Turkish Transportation Minister Ahmet Arslan announcement regarding Canal Istanbul project launch later this year (Guldogan, 2018). The project was initiated by the Turkish Prime Minister Recep Tayyip Erdogan, who became later the first directly elected President of Republic of Turkey. Erdogan first announced Canal Istanbul 'crazy' project in 2011, noticing that it should

reduce the maritime traffic on the Bosphorus Strait (Kucukgocmen, 2018). He promised that the canal will be completed for the 100th year anniversary of the Turkish Republic in 2023.

Canal Istanbul has to connect Black Sea and Sea of Marmara. According to the former minister Ahmet Arslan, and information from the Turkey's Ministry of Environment and Urbanization the canal will connect Terkos Dam on the Black Sea coast and Kucukcekmece Lake on the Sea of Marmara coast, and will be about 45 kilometers long, 25 meters deep, and 250÷1000 meters wide, with estimated value of 15 billion US Dollars (Gyunaydin, 2018). The project mission is to relief the Bosphorus Strait maritime traffic in order to improve environment and transportation conditions in the area of Istanbul, the most populated Turkish city. The strait is passed by more than 40000 vessels annually, transporting 139 million cubic meters of oil (Rapport annuel sur le mouvement des navires a travers les detroits Turcs 2017, 2018, p.47, World Oil Transit Chokepoints, 2017, p.2). In order to achieve the above mentioned mission the canal's capacity is scheduled to be 160 vessels daily (Gyunaydin, 2018).

Significant projects always create political controversies on international and national political scenes. Major projects related to economy and security divide states and political organizations in three major groups: supporters, opponents, and neutrals. Majority of neutrals wait to clarify their advantages and disadvantages of the project.

## 2. CANAL ISTANBUL CHALLENGES AND OPPORTUNITIES

Analysis of the project shows that it will create several challenges in addition to its benefits. These challenges are related to the security and will be in the Balkans, which were named 'Powder keg of Europe'. The Black Sea region is an area of growing military activities, frozen conflicts, militarization, and is a nod of European Union, NATO, Russian Federation, and Turkey interests for global influence (Bekiarova, 2017, pp. 44-54).

Canal Istanbul will have a cluster effect upon security: a single project may cause sub-effects in multiple points, not only in a single one. Canal Istanbul's challenges should not be analyzed in separated or hierarchic relationship, because they will interact as a cam-gear mechanism. This fictional 'cam-gear box' is a multiple non-sequential transmission. But the engineer approach or mathematical description to the Canal Istanbul Security Challenges is not appropriate, because it will lead to wrong results. It is proper to describe Canal Istanbul Security Challenges as a System of Systems, where components are in complex relationship and fast, short, accurate, and prospective description is not possible to be done. This System of Systems has initial point and requires permanent observation, data collection, analysis, and corrections in order to be controlled and managed.

### 2.1. Maritime legislation

The project raised an issue about the Montreux Convention, even before its first official announcement in 2011. The Turkish internet newspaper Todays Zaman published Canal Istanbul project information, based on their source information and this data leak created discussion about relationship between the project and Montreux Convention (Yilmaz, Bozkurt, Kart, and Yavuz, 2010). Several experts, reporters, and observers stated that the project is done in order to circumvent the Montreux Convention. This thesis was denied by numerous experts and organizations, but it has been repeated until nowadays.

#### 2.1.1. Overview of the Freedom of Navigation in the Black Sea Straits

**Table 1. General Ships transit rights and limitations comparison between the UNCLOS and the Montreux Convention**

	The UNCLOS	The Montreux Convention
<b>Rights</b>	<ul style="list-style-type: none"> <li>Enjoy the right of transit or innocent passage, which cannot be impeded or suspended.</li> </ul>	<ul style="list-style-type: none"> <li>Enjoy freedom of transit and navigation, without any formalities.</li> <li>Optional pilotage and towage.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>Proceed without delay, respecting established sea lanes and traffic separation schemes.</li> <li>Refrain from any activities that are not under normal mode of expeditious</li> </ul>	<ul style="list-style-type: none"> <li>All ships entering the straits shall stop at a sanitary control station.</li> <li>Ships are obliged to pay taxes and charges for sanitary control, lighthouses, buoys, life saving, fog sirens, and</li> </ul>

	<p>transit.</p> <ul style="list-style-type: none"> <li>• Comply with laws and regulations of bordering states, regarding fishing, pollution, sanitary, immigration, fiscal and commercial activities.</li> </ul>	<p>direction-finding stations.</p> <ul style="list-style-type: none"> <li>• When Turkey is a belligerent to a war, merchant vessels of opposing states does not enjoy freedom of transit and navigation.</li> <li>• If Turkey is threatened with imminent danger of war, vessels must enter the straits by day, and pilotage may be made obligatory, but no charges shall be levied.</li> </ul>
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The Convention Regarding the Regime of the Straits, signed at Montreux, 20 July 1936 (Montreux Convention) regulates transit and navigation in the Straits of the Dardanelles, the Sea of Marmara and the Bosphorus comprised in this document under the general term 'Straits' (Treaties and International Engagements registered with the Secretariat of the League of Nations, volume CLXXIII, 1936, p.215). It settled several main rights and restrictions, grouped as follows:

- Convention's Articles 1÷7 announce freedom of navigation for merchant ships in the Straits. The freedom includes navigation by day and by night, under any flag and with any kind of cargo, without any formalities, except for sanitary reasons, or when a merchant ship belongs to a country in war with Turkey. Articles 3 and 6 state that taxes or charges shall not be levied, even for sanitary guards or pilotage in cases of diseases and when Turkey consider herself threatened with imminent danger of war (Ibid, pp. 219-221).
- Articles 8÷22 describe in details requirements for warships crossing the Straits. Non-Turkish warships passage through the Straits shall be preceded by a notification to the Turkish Government, their transit have to begun during daylight, and they cannot operate their aircrafts. Non-Black Sea flagged warships are limited in their tonnage and period of presence in the Black Sea. Turkey has rights and is obliged to limit warships freedom of navigation during wartime (Ibid, pp. 221-227).
- Article 28÷29 describe the process of the Convention denunciation and amending, but in Article 28 is clearly stated that principle of freedom of transit and navigation continue without limit of time (Ibid, pp. 229-231).
- Annex I describes taxes and charges that can be levied by the Turkish Government for Sanitary Control Stations, Lighthouses, Light and Channel Buoys, Life Saving Services, including Life-boats, Rocket Stations, Fog Sirens, and Direction-finding Stations (Ibid, pp. 233-235).

**Table 2. Warships (governmental ships) rights and limitations comparison in accordance with the Montreux Convention (Treaties and International Engagements registered with the Secretariat of the League of Nations, volume CLXXIII, 1936, pp. 213-243).**

<b>Rights</b>	<ul style="list-style-type: none"> <li>• In time of peace light surface warships and auxiliary vessels of all states enjoy freedom of transit.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Black Sea states may send through the Straits capital ships of tonnage greater than 15000 gross tons singly, escorted by not more than two destroyers.</li> <li>• Submarines of riparian states have the right to pass through the Straits when are constructed or purchased outside of the Black Sea, notice of the laying down or the purchase should be given to Turkey.</li> <li>• Riparian states submarines have the right to pass through the Straits to be repaired outside the Black Sea, detailed information should be given to Turkey.</li> <li>• Submarines must travel by day, on surface, and singly through the Straits.</li> <li>• Warships transit through the Straits shall be preceded by eight days notification given to Turkey through diplomatic channels.</li> <li>• The maximum aggregate tonnage of foreign warships crossing the Straits is 15 000 tons</li> <li>• Non-Turkish naval force group crossing the straits shall not comprise more than nine vessels.</li> <li>• The aggregate tonnage which non-Black Sea states may have in that sea shall not exceed 45 000 tons.</li> <li>• The aggregate tonnage which a non-riparian state may have in the Black Sea is limited to 30 000 tons.</li> <li>• Non-Black Sea warship may remain in the Black Sea no more than 21 days.</li> <li>• Any aircraft carriers are not allowed to pass through the Straits.</li> </ul>

	<ul style="list-style-type: none"> <li>• Submarines from non-riparian states are not allowed to pass through the Straits.</li> <li>• In time of war, when Turkey is belligerent, the passage of warships is left to the Turkish discretion.</li> <li>• When Turkey is threaten with imminent danger of war, the Turkish Government may apply the previous provision, but by international consent of United Nations and High Contracting Parties of the Convention.</li> <li>• Each Black Sea state shall inform the Turkish Government, annually about the tonnage of its naval fleet in the Black Sea</li> </ul>
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United Nations Convention on the Law of the Sea (UNCLOS) is another act regulating rights and restrictions in straits used for international navigation. Turkey has not signed the UNCLOS, but it has been ratified by 168 countries, including all Black Sea riparian states, and entered into force (Chronological lists of ratifications of, accessions and successions to the Convention and the related Agreements, 2018). The Convention is ratified and signed by the vast majority of legitimate international actors, including the most powerful in policy, military power, maritime capabilities, industry, and commerce. It is important to notice that the UNCLOS does not put in force any specific limitations for warships in international straits.

The Montreux Convention is a legal international act in accordance with the Article 35(c) of the UNCLOS stating that 'Nothing in this Part affects the legal regime in straits in which passage is regulated in whole or in part by long-standing international conventions in force specifically relating to such straits'. Both conventions were created in order to provide balance between freedom of navigation, safety, security, and good order, but the Montreux Convention is more restrictive due to the Turkish successive struggle for higher control of the Straits. Comparison between both conventions in tables 1 and 2 emphasizes that UNCLOS provides more freedom either for warships or commercial vessels.

### 2.1.2. Relationship Between Montreux Convention and Canal Istanbul

Canal Istanbul has to be in accordance with the international law, and it cannot become a waterway circumventing the international legislation for the Black Sea straits. First, the Montreux Convention is in force not only in the Bosphorus, but in the Dardanelles, and the Sea of Marmara for all ships transiting from/to Black Sea. Second, the freedom of navigation in this area will remain even if the Montreux Convention is internationally denounced, because the Turkish Government cannot legally withdraw from this obligation in accordance with Article 28. Third, if the Montreux Convention is denounced, the rest of the Black Sea riparian states and the international community, including major global powers, will insist to follow the UNCLOS, which is much less restrictive.

In accordance with the Montreux Convention the Turkish Government has not legal rights to implement additional taxes or charges, or to slow down the straits entrance in order to establish better operational conditions for Canal Istanbul. A canal may evade the Convention if it connects directly the Black Sea and the Aegean Sea. All intra basin passages through Canal Istanbul will fall under the regulations of the Montreux Convention, and all attempts to put in force a new system for crossing of the Bosphorus after waiting or paying new taxes and charges will be an infringement of the Montreux Convention.

### 2.1.3. Montreux Convention Revision

The historic analysis shows that international pacts and treaties are not guaranteed to last forever. Change of interests, conditions, and force ratio may create political will and capability for amendment of any international treaty. The history is full of international treaties that were amended, changed, or abrogated. Some of treaties and pacts that influenced upon the Black Sea region and were denounced, broken, or amended since 1850s are Treaty of Paris of 1856, Treaty of Berlin of 1878, Treaty of London of 30 May 1913, Treaty of Bucharest of 10 August 1913, Armistice of Mudros of 30 October of 1918, Treaty of Sevres of 10 August 1920, Treaty of Versailles of 28 June 1919, Treaty of Neuilly of 27 November 1919, The German-Soviet Non-aggression Pact of 23 August 1939, and the Warsaw Pact of 14 May 1955.

The Turkish growing economy and military power in combination with current weakness of other regional states are potential reasons for attempts for changes of the Black Sea Straits regime.

Denunciation of the Montreux Convention would cause worries and discontent among Black Sea states, especially in Russia, consenting about military presence of other major powers in that area. In defensive point of view, the Montreux Convention regime is more acceptable for Turkey and Russia, than the UNCLOS and it is relatively good protection for the rest of Black Sea states.

The Turkish Government will gain more privileges if it applies diplomatic and economic pressure for use of Canal Istanbul in order to implement charges and taxes for cargo vessels crossing the straits.

## **2.2. Defence and Protection**

Waterway canals create defensive and protective challenges. They provide shorter and faster route for maritime transportation, making them of great importance for states' economy and defence. Due to functional and geographic relationship Canal Istanbul and Bosphorus Strait should not be separated from the military and protection viewpoint and they require to be accepted as a unified Black Sea – Sea of Marmara Maritime Traffic System.

Bosphorus and Dardanelles Straits are vital for Turkey and their importance created layered, effective and inter-organizational defence and general protection and Canal Istanbul has to be incorporated in this defence and protection system, providing advantages and disadvantages. Canal Istanbul advantages are based on acquisition of a new maritime route and an obstacle for land military aggression and illegal traffic, while its disadvantages originate from resources required for defence and protection. The military advantages and disadvantages will impact on Canal Istanbul's defence and protection simultaneously, coherently, and will contribute in symbiosis to the strait's defence and protection organization and optimization.

Defence and protection systems should provide very high level of protection. This is a result of straits importance for the Turkish economy and wellness. The defence organization is simple to be defined and assigned. The Canal Istanbul defence should be delegated to the Turkish Armed Forces and incorporated in existing defence system of the straits. Main responsibilities for the defence are expected to be separated as follows:

- Turkish Naval Forces: maritime situational awareness in vicinity of Canal Istanbul entrances; naval mine protection; antisubmarine defence; defence against warships and amphibious actions.
- Turkish Air Forces: air situational awareness in vicinity; air defence.
- Turkish Land Forces: coastal defence against amphibious assaults (in cooperation with Turkish Naval Forces); military engineer support; weapons of mass destruction defence.

The defence organization will be extremely hierarchical, structured, and delegated. It will be a result of armed forces characteristics, way of work, planning, operating, and decision making. The main part of responsibilities for the straits defence will be in vicinity of the Black Sea entrance of the canal and will belong to the Turkish Naval Force, responsible for the flow of goods and freedom of navigation in this strategic zone (Sanders, 2014, p. 43). Military capabilities on the Sea of Marmara entrance of the canal will be unnecessary expenditure of resources due to its geographic land lock within the Turkish territory.

A new waterway will not require doubling of all straits' defensive capabilities. The canal defence will require new facilities and installations for some sensors, coastal batteries, berthing places for small endurance warships, command posts, communications, and support facilities. New capabilities and units are expert assumed to be as follows:

- Surveillance Posts at the entrances for technical and visual observation at any time, in all meteorological conditions.
- Command, Control, and Communication Network for units allocated in vicinity of the canal.
- Inshore minesweeping and mine hunting units providing maritime mine protection in the vicinity of its entrance.
- Units for protection against underwater diversions and terrorist activities.
- Coastal batteries for defence against small, high speed crafts and low-flying aircrafts.
- Berthing places or ports for small endurance warships, or for temporary diverted for operations in canal's vicinity.
- Logistic and supply facilities and units.

New facilities for frigates, corvettes, coastal mine hunters, and mine sweepers will not be required, due to their higher seagoing capabilities and endurance. The Turkish Naval Force should create new assets and units in order to provide required level of defence. Rest of the Turkish Armed Forces services will not be required to create new installations and to deploy new units in order to complete their tasks.

The protection organization will not be as structured and organised as the defence. It will be more complicated and partitioned in different functional areas among many organizations. Its main participants and sponsors will be the Turkish Ministry of Interior; National Intelligence Organization MIT; Ministry of Transport and Infrastructure; Ministry of Customs and Trade; Ministry of Justice; private security companies, and last but not least the Armed Forces. The Turkish Armed Forces will be an active participant due to their capabilities and their mission for law enforcement assistance to other governmental structures (Turkish Armed Forces General Staff, 2018). The protection will cover following functions:

- Physical protection of the canal and its constructions and elements.
- Cyber protection of the canal's network.
- Control of over canal crossing vehicles and their crews, cargo and passengers.
- Control of vessels using the canal and their crews, cargo and passengers.
- Control of people crossing the canal or acting suspiciously in vicinity.
- Recovery from natural or manmade damages.

Above mentioned protection functions will not be separated and delegated to a single appointed organization per function. Most of them will be covered by several organizations. Historical observations show a tendency of competition and overlapping between governmental organizations, struggling for importance, influence, and additional resources.

All defence and protection challenges will be deeply analyzed by the Turkish State and will bring to solutions and transformations. The Government will initialise spatial planning in order to provide canal's defence and protection.

The new valuable waterway will increase the importance of defence and protection structures in strait's zone, and will add new organizational requirements, but will not consume significant additional resources in peacetime. Canal Istanbul will require higher efforts and resources in time of crisis or war, but will provide second waterway and will split potential enemy's actions and forces.

### **2.3. Canal Istanbul Exploitation and Impact**

Canal Istanbul existence can be funded in three ways:

- Free passage of ships and state's funding of the canal in order to shift the maritime traffic off the Strait.
- From taxes and charges paid by crossing ships.
- Combination of both methods.

The free use of the canal will attract the ship owners and operators, but will require significant budget. This brings to risk of national opposition and lack of funds for other projects.

Taxes and charges will provide required funds, but in accordance with the international maritime law ships cannot be forced to use the canal. Mandatory use of the canal will create several problems with other states, international organizations, and private companies. Turkish acts and pressure in support to additional cost for transit through the straits and limitation of the freedom of navigation will cause reaction similar to the third physical law of Isaac Newton. But due to complexity of international relationships the reaction will not be simultaneously, equal in magnitude and opposite in direction on the initial act. Expert analysis and brainstorming show that the most likely and high probable reactions to the increased costs and decreased freedom of navigation are:

- International tensions between Turkey and the Black Sea and Danube river riparian states, European Union, and other countries trading with this region. These tensions may lead up to new coalitions, worse diplomatic relationships, economic sanctions, force demonstrations and even to use of force.
- Development or revival of projects like of the Russo-Iranian Caspian Sea – Persian Gulf (Indian Ocean) Canal and land route; Bulgarian-Greek-Russian project Burgas – Alexandroupoli pipeline for transportation of Russian and Caspian crude oil to the Aegean Sea, bypassing the Black Sea straits; transport corridors from Albanian, Croatian, and Greek ports to neighboring Balkan states.
- Shift of the Russian trade with resources to other transportation means (pipelines), through other ports in Baltic Sea, or to the 'hungry' for resources Chinese market.

In addition to these probable reactions, there is very low probability that the Turkish pressure for new taxes or charges and use of the Istanbul Canal will bring an advantage to ship companies from states with significant potential to protect their interests and tax payers. The USA, France, Great Britain, Germany, China and many more significant countries use their financial, economy, diplomatic and military capabilities for protection of the national business.

All above mentioned reactions can be assessed in numbers, with calculation of their probability ranges, risk estimation, and economic impact. A research of this level requires significant budget and numerous experts and scientists (in mathematics, statistics, law, international relationships, management, economy, defence, security, psychology, geography, and history).

Majority of international actors will not support, or will oppose Istanbul Canal project. Few countries, organizations, and companies may support the project in order to gain fast profit from worsen trade with

Black Sea riparian states. But they should assess the balance between short-term profit and long-term risks from limited freedom of navigation and price rise of their own goods and services on the market of Black Sea region.

## **2.4. Turkish Internal Policy**

The Turkish Government will develop the project under the influence of the people. Main reason for internal challenges will be the project's effect upon Turkish citizens.

Internal challenges and opportunities are as important as international or even more important for any project, because internal support and opposition are vital for its planning, financing, execution, and exploitation. The governing Justice and Development Party (AK Parti) and its leader the President Erdogan are supported of almost half of voters, and has above 10 billion members (Adalet ve Kalkınma Partisi, 2019). Therefore, the initial people's support to the project is ensured.

The government will explore all opportunities to increase its support and the project's realization. The governmental and people's benefits of the Canal Istanbul project are:

- Rise of the national self-confidence and mobilization of the people's will in order to complete the project for the 100th anniversary of the Turkish Republic.
- The project will provide support to the economy, especially in areas of transportation and labour market.
- The project will increase the amount of experienced specialists in big constructions and buildings, making them available at the end of the project for other irrigation or transportation structures in Turkey or abroad.

Unless opportunities, the project will meet and following challenges:

- Opposition parties will try to use its weaknesses for struggle against governing party.
- Significant budget cost of the project.
- The project requires enormous amount of high-skill workers, technicians, and engineers, who will have to work extremely effectively in order to complete the project until 2023.
- If the project is not profitable, it will create internal political and additional budgetary problems.
- The canal will create transportation narrow points on land roads between Turkey and Europe.
- The canal will take part of the best agricultural land, famous with luxuriant vegetation, which is important for the Turkish industry and export.
- The Turkish State has significant problems budgetary problems and revises major projects

The investment situation in Turkey is endangered not only due to the national currency inflation, but to the significant downgrade of its credit rating as a result of political, fiscal and economic weaknesses (Turkey Credit Rating 2019). The Turkish economic recession forced the government to review large publicly-financed investments, and to discuss delay or cancelation of Canal Istanbul (Demirtas, 2018).

## **2.5. Environment**

Environmental challenges are very important, because they can shift people's opinion and ecological organizations operate in multinational environment, exploiting broad international support and funding. Environmental challenges require to be reviewed as a separate component, because they combine international legislation and have impact upon natural resources, international and internal policy and relationships.

Canal Istanbul will cause contradictions with signed by Turkey Barcelona and Bucharest Conventions, and the EU Coastal and Marine Environment Policy (Marine Environment, 2019). The legislation will be used by European Union, national governments and ecology organizations as leverage against the project.

Contradiction against the project is supported by several scientific researches and studies. Precise prediction of environmental risks requires accurate information about the canal characteristics and structure, which have not been promulgated. But scientists and experts did analysis of environmental challenges and their effect upon nature and people based on the available general information. The common scientific opinion is that Canal Istanbul is a dangerous project for the Black Sea, the Sea of Marmara, the city of Istanbul, and the ecosystem in the vicinity (Sozer, Ozsoy, 2017, pp. 77-85, 2016, Ozsoy, Cagatay at al, pp. 9-10, 945-946, Raykov, 2018, Saydam, 2015, pp. 44-52). Scientists and experts analyzed following major risks for the environment:

- Negative impact upon the Black Sea and the Sea of Marmara flora and fauna due to exchange of water and alternation of local streams and currents. This will worsen and the city of Istanbul sanitization system.

- Change of flow of fresh water rivers and underground streams, putting in risk the water-supply of Istanbul area.
- All species eastward of the canal will remain on an 'island' and some of them will be cut of their biotopes.

Any ecological risk or problem finds strong supporters in people, causes serious internal and international interest, and brings high probability of national or diplomatic problems.

In addition to above mentioned risks, there is a positive ecological effect of the canal: ships carrying oil, petrol products, and whatever dangerous cargo will cause extremely less and limited damages in case of accident.

## **2.6. Bosphorus Strait Traffic and Incidents**

The Bosphorus Strait has very dense traffic compared, but this level of traffic is normal for international straits, channels and canals. Last decade tendency is that the international traffic and crude oil and petroleum products transportation through the Strait has decreased, due to shift to other routes and means of transportation (World Oil Transit Chokepoints, 2017, pp. 2-12, Pizon, 2006, Rapport annuel sur le mouvement des navires a travers les detroits Turcs 2017, 2017, pp. 45-47). Important statistics for the Strait are that it is in the bottom of the world's list of crude oil and petroleum products transport through chokepoints; the amount of accidents is not high; and the Turkish cabotage traffic is about 16-17 times more intensive than the international (Akten, 2006, pp. 291-296, World Oil Transit Chokepoints, 2017, pp. 2).

Important point for the safety in the strait is that the tendency in ships construction is to become bigger, with higher level of safety, and better protection against oil spills in case of incident. Therefore, the number of big cargo ship should decrease and they will be less dangerous. Maritime incident statistics show that (Annual Overview of Marine Casualties and Incidents, 2018, pp. 14-47):

- The number of cargo ships involved in incidents is almost equal to the number of fishing, service, cabotage, and warships involved in incidents.
- Only about 20-30 percent of cargo ship incidents are in transit and rest are when anchored, alongside, arriving, departing, or mid-water.
- Incidents in fairways and canals are low part of the total amount.
- About 60 percent of incidents are caused by human erroneous acting, and about 25 percent are caused by equipment failure, which usually is a result of poor maintenance or operation.
- The straits number of incidents is low, compared to the Danish Straits the English Channel.

Above mentioned numbers and facts show that the international maritime traffic and the number of incidents are not the major risk to the strait and its coastline. The governmental opinion, that the risk of incidents is a reason to build Canal Istanbul is not supported even by Turks, and Cem Devrim Yaylalı stated 'The risk is there but it is manageable if all parts of the system work as they should. That means the Vessel Traffic Service [traffic control for the ships], the pilots and the ships' crew and machinery need to work as advertised'(Hurriyet Daily News, 7 April 2018).

The project for Canal Istanbul will be challenged by the lower number of crossing ships, and their better technical characteristics. This will cause less incidents and lower pollution. In addition, ships are responsible for caused damages and pollution and the international community will require efficient management in return to taxes and charges for passing the strait (Terziev, Petkov, Krastev, 2018a-j; Terziev, Bankov, Georgiev, 2018l-m).

## **3. CONCLUSION**

Canal Istanbul is a major, but unclear and disputable project. It was officially announced in 2011, and eight years later all available information is based on politicians' speeches and interviews, only. A real and specified plan has not been published, but the project deadline is noticed for 2023! It is obvious, that this lack of information is not based on secrecy and confidentiality; otherwise the project would have not been announced by politics, including details about its dimensions, capacity, and entrance points.



**Table 3. SWOT analysis of Istanbul Canal**

	HELPFUL	HARMFUL
Internal origin	<p><b>STRENGTHS:</b></p> <ol style="list-style-type: none"> <li>1. Additional waterway between the Black Sea and the Marmara Sea.</li> <li>2. The canal is not difficult to be protected and does not require significant resources to be protected in peacetime.</li> <li>3. The canal will split potential adversary's efforts in time of war.</li> <li>4. The canal has capabilities to cover the entire international maritime traffic through Bosphorus.</li> </ol>	<p><b>WEAKNESSES:</b></p> <ol style="list-style-type: none"> <li>1. Four year term to fulfil the project.</li> <li>2. Absence of real project with budget.</li> <li>3. Significant risk that the project will become unprofitable.</li> <li>4. Bosphorus maritime traffic limit has not been reached, and have decreased for last years.</li> <li>5. The financial and investment situation in Turkey weakens national capabilities for investment in major projects.</li> <li>6. Use of agricultural land.</li> <li>7. Ecological risks.</li> <li>8. Additional resources are required to protect the canal, in time of crisis or war.</li> <li>9. Worsen land traffic above the canal.</li> </ol>
External origin	<p><b>OPPORTUNITIES:</b></p> <ol style="list-style-type: none"> <li>1. Experienced human resources in irrigation building will be available at the end of the project.</li> <li>2. The governing party has had quite strong people's support.</li> <li>3. The terrain has not significant obstacles and provides short, straight canal, with few water-lock.</li> </ol>	<p><b>THREATS:</b></p> <ol style="list-style-type: none"> <li>1. The traffic through Canal Istanbul remains under Montreux Convention, therefore vessels should not be forced to use the canal or to pay additional taxes and charges.</li> <li>2. If the Montreux Convention is amended or suspended, the freedom of navigation through straits has to remain.</li> <li>3. One-side introduced regulations and fees will cause an international crisis.</li> <li>4. Additional expenses for passage will support rival projects.</li> <li>5. Ships are responsible for all damages caused by them.</li> <li>6. Local elections results are not very positive for the governing party.</li> </ol>

An extremely appropriate technique that delivers simple, short, visualized, and useful results for planners and managers is the SWOT analysis. SWOT analysis of Istanbul Canal has numerical balance of seven helpful, and fifteen harmful counts. The quantity comparison is not the most important, but shows twice more harmful than helpful elements. The final outcome of all strengths, weaknesses, opportunities, and threats proofs that Istanbul Canal will be more problematic than advantageous for the wide Black Sea region and Turkey.

People's support is very important for governmental policy projects, because state's authority obtains its power from people behind it. Last Turkish local elections held on 31 March 2019 showed decreased support for the AK Parti, including in the Istanbul's area, where the AK Parti has had strong support. The government should react and recover people's support with widely accepted projects, better life standard and popular policy.

The sum of negative experts and scientists opinion regarding Canal Istanbul, decreased people's support for

the governing party, budget restrictions, and risk of international resistance will decide the future of Canal Istanbul. There is a high probability that it will be canceled under the budgetary restrictions and will remain only a political notice and test of the international opinion about amendments or denunciation of the Montreux Convention or will become a step to a canal connecting directly Black Sea with Aegean Sea in order to bypass the entire strait zone and the Montreux Convention.

If the Turkish government decides to continue the project it will need to answer following questions:

- What will be the ecological impact of Canal Istanbul upon Black Sea, Sea of Marmara, land and population?
- What will be the impact upon national budget and security?
- What reasons and arguments will promulgate in order to limit Straits' freedom of navigation and to implement additional taxes and charges for passing vessels?
- What changes to the regime established by the Montreux Convention will accept Black Sea and Danube river riparian states, European Union, global powers, and the whole international community?
- Is it ready for confrontation with other countries, international unions, and organizations in order to build a canal that will duplicate a natural strait?
- Is it ready to offer free passage through Canal Istanbul in order to reduce the risk of collisions, oil spills, and other environmental threats in the vicinity of Istanbul, the most populated Turkish city?

The current Canal Istanbul project is not beneficial. It is a parallel, useless, slower, low-effective, and non-efficient duplicate of a natural strait that has not reached its traffic capacity. Canal Istanbul will create legal, economic, and ecologic problems. It will not bring benefits proportional to created security problems. The safety of navigation risk of pollutions will be decreased if the daily traffic of about 120 international and 2000 local passages is maintained and developed in order to provide strict navigational control of ships and their crews. The statement that it will decrease oil pollutions in Strait should be compared to the highest pollution with exhaust gases maneuvering through the canal, in the middle of a land area, surrounded with agricultural lands and residential places.

A canal that is scientifically developed and supports the prosperity and well-being will be useful for Turkey and the region and will receive national and international support. Otherwise it will meet several stumbling-blocks and will be under permanent national and international attacks.

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