

TEMA  
03.11

Contributi

<http://www.tema.unina.it>  
ISSN 1970-9870  
Vol 4 - No 3 - settembre 2011 - pagg. 53-63

Dipartimento di Pianificazione e Scienza del Territorio  
Università degli Studi di Napoli Federico II

© Copyright dell'autore.

# The Crazy Project – Canal Istanbul

## II “Crazy Project” - Canale di Istanbul

Seda Kundak\* and Mete Basar Baypinar\*\*

\* Istanbul Technical University, Turkey  
Department of Urban and Regional Planning  
e-mail: kundak@itu.edu.tr

\*\* Istanbul Technical University, Turkey  
Department of Urban and Regional Planning  
e-mail: baypinar@itu.edu.tr

It was late April 2011 when the Canal Istanbul Project has been proposed by the Prime Minister (PM) Erdogan. The origins of the canal idea traces back through the 16<sup>th</sup> century, during the Ottoman reign that the PM emphasized in his speech as “... a dream comes true...”

Although an alternative sea route used to be a necessity for the transportation of timbers during the Ottoman Empire, this contemporary project targets great alterations in economic growth and to enhance the strategic position of Turkey in the global arena. The Canal Istanbul Project is grandiose not only because of its objectives, but also of the location choice, the financial model to be used in construction and because it provokes international maritime conventions. Since the facts on the Canal Istanbul Project are just referred to the speech of the PM Erdogan during the election campaign, in this paper, we speculate on the probable features of the Canal related to the current situation and assets of Istanbul. Next chapter focuses on the scope and motivation of the Canal Istanbul. Hereby, the speech of the PM has been mostly decoded in order to better presume basic reasoning of the canal.

The following chapter underlines challenges and limitations on the realization of the project. The chapter four covers several speculations we developed on the implementation approach of the project. A critical question arises at the chapter five such as “Istanbul will be a winner or loser due to the canal project?”.

### The scope and motivation of a new canal

When the “Crazy Project - Canal Istanbul” was first announced, at first many people perceived the project consisting of a sole canal, to be built as an alternative passage between the Black Sea and the Sea of Marmara. Thus, many speculations and comments were made based

It was late April 2011 when “the Crazy Project - Canal Istanbul” was proposed by the Prime Minister of Turkey, during his election campaign. The proposed project consisted of construction of an entirely new city, an airport, a seaport and recreational areas. But the most important and striking element was a new maritime transportation canal which is to be constructed as an alternative to the Bosphorus Strait.

Although the idea of an artificial canal is not new, since it has been initiated without any consensus between the people and institutions in Istanbul, and no scientific or technical study about the feasibility and environmental impacts of such a project has been presented, the “crazy” project immediately set a large number of debates among scholars and professionals.

These vary from the legitimacy of decentralization of governance, to technological and legal possibilities for construction, feasibility of the canal in operational terms, potential impacts of the canal on international politics, economy, environment, international relations and urban life.

Since the only information about the project was a digital animation, presented in the election speech of the Prime Minister, there is little information about the scope of the project. Such large scale investments in Istanbul have caused extensive acceleration in construction sector on one hand and social and economic shifts on the other.

The “crazy” project initiated by the ruling party which is known to be ambitious in real estate projects has therefore raised hot debates across scholars and professionals. A variety of articles were produced in response, discussing the scope of the project and its potential impacts on the environment, the city of Istanbul, Turkey's international relations and the economy of Turkey. However, these articles often focused only on the fictional “Canal”, and neglected the full scope of the project. Since the project is ambitious, large, but little is known about its exact location and land use pattern, it deserves an evaluation with a wider perspective than current articles that may be found in popular science magazines or daily newspapers.

In this paper, the Canal Istanbul Project is evaluated mostly according to the speech of the PM, which provides basic motivations and claims for the project. The second group of sources is the past ideas and projects of an artificial canal initiated almost 500 years ago. The third group of sources consists of scientific and journal articles published in the Turkish media after the speech. We try to describe challenges and limitations which the project is likely to face by implying a multi-perspective view. Then we speculate on the implementation approach, basing on the current planning experience and the recently approved Master Plan of Istanbul.

The final discussion on the project is based on benefits/losses of Istanbul once the project will be implemented.



The Path of the Canal Project in the Ottoman Period.

on this assumption putting emphasis on international treaties such as the "Montreux Convention Regarding the Regim of the Turkish Straits" signed in 1936, and associated sea conventions. However, the reality is that the project is actually a large, complex project as presented initially by PM Erdogan during the election speech on late April 2011. The project is claimed to be multidimensional: "...is an energy project, ...a transportation project, ...a development project, ... an urbanization project, ...an environmental protection project". And it is unique for its grandiose: "...this project, which cannot even be compared to those like The Panama Canal, The Suez Canal, or the Corinth Canal...".

And it is the realization of a 400 years old idea, by destiny: "...we are granted for the realization of this project".

In fact the idea of an alternative canal to the Bosphorus is old wine in new bottle. The original idea of a channel connecting the Sea of Marmara and the Black Sea through channels interconnecting Izmit Gulf, Sapanca Lake and Sakarya River dates back to the 16th century, to the reign of Sultan Suleiman the Magnificent. The project was so important that there were 7 attempts by 7 emperors during 400 years, the last being done in 1863 (Yılmaz, 2010).

Mr. Erdogan referred directly to the previous attempt from the last attempt. This was made by Sultan Abdülmecit Han, at 1856. The original canal project was designed to serve a completely different need and was to be located in a completely different geography.

The canal intended to serve a very strong basic need: carrying large masses of timber to the city of Istanbul, and to other important ports. Timber was the major construction material both for ships and buildings, thus it was a strategic resource for civil and military needs. The project consisted of two canals, the first to connect the Bay of İzmit to the Lake of Sapanca, and the second to connect the Lake of Sapanca to the River of Sakarya. By this canal, it would be easier to supply the shipyards in Istanbul and to transport timber to other important harbors such as Trabzon and

Selanik (Thessalonica). Thus, costs of transportation of timber would decrease, leading to a drop in the total cost of timber. We may identify the Old Project as an attempt to integrate local industries and natural resources, and it was initiated at a time when the Black Sea was completely occupied by the Ottomans. This is utterly different than the new "Canal Istanbul" project which there was no hint about how it would serve to the development of local manufacturing and construction systems.

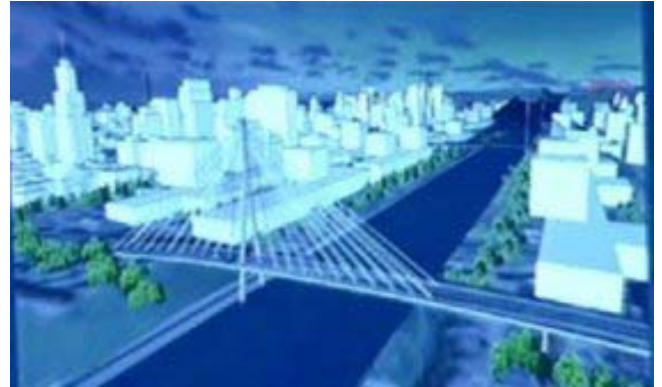
However, it is true that the idea of having such a canal has often fascinated and inspired, or been seen as a necessity to overcome underdevelopment of the country, by many historians, politicians, engineers, academicians and ordinary citizens throughout ages. As an example, Yılmaz (2010) seems to believe that the absence of such a channel is almost a competitive disadvantage against Europe, where many channels were built interweaving cities across the continent during last centuries. Furthermore, he believes that it will help in reducing the traffic through the Bosphorus, increase military strength, decrease congestion in the ports at the Sea of Marmara, help in the socio-economic development of the region and enable the relocation of industries in Istanbul, to East, so that stress over the city will be decreased. However, the contemporary project proposal is significantly different from the classical one, as we discuss below. As presented, the project consists of the following elements given below.

Transportation elements:

- A 50 km long maritime transportation canal, 150 m. wide and 25 m. deep, to be built between the Sea of Marmara and the Black Sea, at the European part of the province of Istanbul<sup>1</sup>. The canal will allow the passage of vessels up to 300.000 DWT, which is about 10% larger than the maximum allowed in other canals such as the Suez, as claimed by the PM.
- An airport to be the largest in Turkey, with a capacity of 60 million passengers per year, to be built by using the debris of the canal project to fill up obsolete quarries in the Northern European Istanbul.
- A seaport.
- Motorway bridges passing over the Canal, including connection and approaching roads to the 3<sup>rd</sup> Bosphorus Bridge to be built.
- Railway bridges passing over the Canal Urban Functions
- Residential areas<sup>2</sup>
- Congress and convention centers.
- Cultural facilities.
- Tourism facilities.
- Business districts.

Recreational Functions:

- Recreation areas.
- Some existing lakes formed by filling up of rainwater to old quarries to remain as they are.



The Canal Istanbul and the new settlement along the Canal.

PM Erdogan underlined that the exact location, shape and context of the project will be kept confidential in order to prevent potential negative developments. Execution of associated analytical studies and preparation of implementation projects will last two years and the project may experience alterations during these studies. By the end of the project, he said, Istanbul will consist of two peninsulas and an island.

Referring to the following sources and our professional observations, we speculate that the project is likely to be located as shown in the figure (next page):

- the demonstrated digital animation of the project at the election speech;
- a variety of images published in newspapers, blogs and other popular internet media;
- the addressed historical project of Izmit Gulf, Sapanca Lake and Sakarya River Canal;
- the references given to the Corinth Canal in Greece;
- planning and urbanization practices in Turkey and especially in Istanbul that often ends with poor outcomes of natural and cultural heritage preservation, and bilateral urban development across newly built motorways.

The Project is strongly connected by PM Erdogan to the target year 2023, the centennial of the foundation of the Republic of Turkey.

The associated nation-wide targets are ambitious: to achieve a country with an annual GDP per capita of 25.000 USD, to construct 15.000 km of double-deck roads (not motorways), to establish fast rail connections and increase the number of local tourists from 2 million to 20 million per year.

There is also unclear ambitious targets about number of international tourists, which is currently about 20 million tourists per year. In this speech he has also announced that 500.000 new housing to be built (probably in Istanbul) by year 2023. That is why it is not surprising that the proposed project is also ambitious. In his own words, "We said that Turkey amply deserves to enter to the year 2023 with such a great, crazy and magnificent project, and we took its step".

The complex canal project is reasoned by the PM by a variety of issues. Below we try to summarize the reasons provided in the mentioned election speech, as well as discuss the facts and evidence associated with the following reasons.

*Reason 1:* As a candidate global actor, Turkey needs the Canal Istanbul Project.

*"If Turkey is going to be a global actor, the Canal Istanbul Project is a necessity, rather than only a dream."*

By increasing international exports and imports, integration to the European Union, increasing influence on the Black Sea Region, The Balkans, and Northern Africa and the Middle East, Turkey is becoming an important player in the global arena as an emerging market economy. The role of strategically located Istanbul in this context is eminent as it has always been the most important city in this geography from the Byzantine ages until the World War I. Indeed recently, many studies suggested that Istanbul should be thought as one of the global cities which is strengthening its position in the global city network, and becoming a global gateway for Turkey, as well as a passage between the Black Sea and Mediterranean, and Europe and Asia (Erkut and Baypınar, 2009, Erkut and Baypınar, 2007, Mehlbye, 2000). This increases the need for logistics and transportation, business districts for producer services, and international tourism areas, and housing for associated workforce.

*Reason 2:* To minimize threats on population and cultural heritage that are posed by potential marine accidents.

The PM proposed full elimination of pass-through traffic generated by international marine transportation, by redirecting the vessels to the proposed canal. At an initial look, the PM's claim can be reasoned by a brief look at the facts about the the Bosphorus Strait, where ships have to maneuver 15 times to travel the strait. Especially two of these maneuvers are dangerous, with angles of up to 85° offshore Pasabahçe and 70° at Yeniköy. A large stock of historical buildings is aligned throughout the Bosphorus, of which a significant share belongs to Yeniköy. The situation becomes even more serious considering that approximately

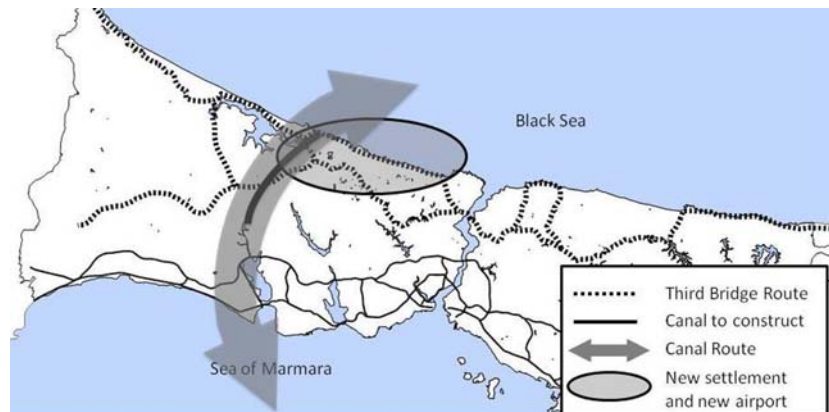


147 million tons of 359 million tons of cargo consists of dangerous materials such as crude oil, LPG and chemical compounds. In the last 10 years, about 700 incidents (11 of which were major accidents) happened in the Bosphorus Strait, where the majority is related with navigation and technical failures (Undersecretariat for Maritime Affairs, 2011).

Mr. Erdogan has provided the case of the Accident of Independenta at year 1979, which was a major disaster caused by collision of the crude oil tanker named Independenta with a dry – load vessel that ended up by a massive explosion and a month-long fire at the Southern entry of the Bosphorus. To our opinion, this example is not a completely reliable reason despite its size. It was a disaster in which a petroleum tanker vessel hit straight ahead a standing vessel at the entrance of the Bosphorus, about 800 m off the Haydarpasa Port, and exploded in the 15th of November, 1979. The fire continued 27 days and 43 people died. Therefore, safety has become a reason for the proposition of the Canal Istanbul Project. Related to the safety issues, it is claimed in the speech that around 2.000.000 people are under threat by passage of 147 million tons of dangerous loads throughout the Bosphorus Strait. The contradiction lies in the heart of the project that a new city with 700.000 residents will be built at the entry of the Canal Istanbul. The Independenta Disaster happened at the entry of the canal; thus, the reason becomes obsolete by the nature of the proposed project. On the other hand, the Canal could still provide safe passage to vessels rather than the Bosphorus Strait, due to strong currents, significant local traffic and sharp turns throughout the journey in the current conditions.

*Reason 3:* To increase recreational activities and intra-city sea transportation in the Bosphorus strait.

Mr. Erdogan claimed that by removal of international marine traffic, the Bosphorus Strait will be given back to its real users, the people of Istanbul and return it to its original use. This claim is partially true, partially not. The true thing is that increasing maritime traffic in the Bosphorus Strait is an important obstacle for sports, leisure and tourism activities, as well as intra-city transportation. It is a fact that the Bosphorus is becoming an important and interesting playground for international motorboat racing, the Black Sea Yacht Rally and other events, and increasing tourism activity puts pressure on the local government to provide more leisure-related services. The wrong thing is that the Strait has always been an international maritime corridor, and Istanbul was the main gateway city for incoming and outgoing products. For centuries there were only few small



Possible locations of components of Channel Istanbul.






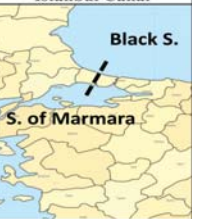
settlements in the Anatolian side. Chalcedon, on the Anatolian side, was a major destination for gemstones produced in other countries of the old world. Rather than the Strait, Kalamys on the Anatolian shores of the Sea of Marmara and facing Princess Islands, and Kagythane, the upper part of the Golden Horn were major recreation sites with waterfront and water based activities, which has a well rooted past in the culture of Istanbul.

*Reason 4:* To preserve the natural life by reducing contamination of the seas due to anchored ships waiting to pass the strait.

Vessels which would pass the Bosphorus Strait have to be anchored and to wait their turn at the both entrances, due to heavy traffic<sup>3</sup>. Furthermore, during the passage of large crude carriers, no other vessels are allowed to pass through the strait. A great number of vessels thus can be seen waiting around both ends of the strait, every day of the year. The PM claims that the canal will eliminate waiting time because it will allow a more efficient passage of vessels, once it is built, so that potential risk of discharge of wastewater from waiting vessels will be eliminated.

Current evidence suggests that the wastewater and ballast water of sea vessels that travel across different seas pose a significant threat to local habitat. The most important threat is the invasion of alien species which are transported to other seas through ballast water of sea vessels. The Black Sea already suffers such an invasion from an alien species of medus named Mnemiopsis Leidy, in the last two decades. However, canals also may also facilitate such invasions, as is the case between the Mediterranean and the Red Sea, where both Lessepsian and Anti-Lessepsian migration of species is observed (Demirel, 2011).

In this section we tried to summarize the motivations behind the project, the scope and size of it, and provide facts and counter-facts about the propositions claimed by the PM to rationalize the necessity and uses of "The Crazy Project Canal Istanbul". In the further sections, we try to discuss the scope of the project and the reasoning more in detail,

	Panama Canal	Suez Canal	Corinth Canal	Kiel Canal	Bosphorus Strait	Istanbul Canal
						
<b>Junction</b>	Atlantic and Pacific Oceans (Ref: Panama Canal, 2011)	Mediterranean Sea and Red Sea (Ref: Suez Canal, 2011)	Gulf of Corinth and Saronic Gulf (Ref: Corinth Canal, 2011)	North Sea and Baltic Sea (Ref: Kiel Canal, 2011)	Black Sea and through Sea of Marmara to Aegean and Mediterranean Seas (Ref: Undersecretariat for Maritime Affairs, 2011)	Black Sea and through Sea of Marmara to Aegean and Mediterranean Seas (Ref: Speech of PM Erdogan, 2011)
<b>Vessels passing per year</b>	15.000	18.000	15.000	32.000	50.871	55.000 (planned)
<b>Alternative route</b>	Strait Magellan or Cape Horn (south of the South America)	Navigation of Africa continent through Cape of Good Hope	Journey around the Peloponnese	Journey around the Jutland Peninsula	No alternative	Bosphorus Strait
<b>Saving journey by using canal</b>	App. 3000-5000 miles (5-14 days according to the speed of vessel)	e.i from Piraeus to Jiddah 9887 miles (16-34 days according to the speed of vessel)	App. 430 miles (app. 1-1,5 days according to the speed of vessel)	App. 250 miles (app 15-20 hours according to the speed of vessel)	N/A	Same as Bosphorus Strait
<b>Challenges at alternative routes</b>	Weather conditions	Weather conditions and piracy	Harsh weather conditions	Long distance	N/A	N/A
<b>Average cost to pass</b>	According to type, size and type of cargo	According to type, size and type of cargo	According to type, size and type of cargo	According to type, size and type of cargo	Free except taxes	No information
<b>Length</b>	77 km	193,3 km	6,4 km	98,6 km	31 km	45-50 km
<b>Depth</b>	Locks	24 m.	7,5 – 8 m.	11-14 m.	65 m	25 m
<b>Width</b>	34 m. (in locks)	205 m.	21,3-24,6 m	90-162 m.	0,7- 3,4 km	145-150 m.

Artificial Canals, Bosphorus Strait and the “Canal Istanbul”.

focusing on a variety of items briefly. These cover a variety of challenges posed by specific international law as well as legal and planning obstacles, the topology, agricultural areas, underground water system, forests and protected cultural and natural heritage areas. We also try to evaluate the project in comparison with other three important canals addressed in the speech of PM Erdogan, The Panama, The Suez, and the Corinth.

### Challenges and Limitations

In this section we try to evaluate the project under four titles, regarding challenges on economic efficiency, limitations due to international conventions, environmental challenges and legal framework, and challenges associated with preservation of cultural heritage.

#### *Economic Efficiency*

The main challenge on the Canal Istanbul Project is related with its usage. In his speech, PM Erdogan underlined that the canal will be unlike its equivalents in the world. The canal will have a length of 45-50 km. with the depth of 25 m. and the width of 145-150 m. It is estimated that about 55.000 vessels per year will pass through the canal.

The most well-known canals in the world were built painfully, to achieve dramatic shortening of sea navigation distance, and reduce risks associated with extension of duration of journey, and exposure to harsh weather conditions. For instance, as well known, The Panama Canal dramatically reduces the duration of cruise between ports like New York or London and Los Angeles. Likewise The Suez Canal

does between European ports and the ports in the Far East. While Panama Canal shortens the cruise durations around 5 to 14 days, using Suez Canal saves from 16 up to 34 days. Shorter canals such as The Corinth Canal and The Kiel Canal help economize the travel distance between Gulf Corinth-Saronic Gulf around 1-1,5 days and North Sea-Baltic Sea around 15-20 hours respectively. In the case of the Bosphorus Strait, there is neither a shorter nor longer alternative to connect the Black Sea to the Sea of Marmara, so the duration of cruise does not change. The PM claims that large ships will save in terms of waiting time. However, it is not clear if an alternative canal will significantly reduce the waiting time. Furthermore, while the passage of the Bosphorus Strait is toll-free (except taxes), vessels passing through the canal is likely to be charged according to their type, size and type of cargo as it is the case in the other canals.

#### *Limitations due to International Conventions*

From this point, another challenge arises: existence of a non - charged Bosphorus Strait near by the proposed canal. According to the “Montreux Convention Regarding the Regime of the Turkish Straits” (1936), all ships are free to pass (except taxes) the straits without having a port pilot. In the case that the captain of the vessel asks for a port pilot, this is charged. During the war time, having a port pilot is obligatory but without any charge. Consequently, the status of the Bosphorus Strait is a great obstacle to force vessels to pass the new canal instead of the strait.

#### *Environmental Challenges and Legal Framework*

Despite great investments provide new opportunities in both urban and regional development after being



Vessel passing through the Bosphorus Strait.

implemented, their planning process faces to several challenges and limitation considering their probable impacts in the future. As generally exercised, in Turkey, the primary stage of the planning process of large investments (factory, power plant, high speed roads, etc.) a compulsory study of "Environmental Impact Assessment" (EIA) is requested. The report is expected to clearly explain possible impacts of planned investment on sensitive natural, social, cultural and urban structure. Since the first urban plan of Istanbul by Henri Prost (1937), the city has been planned to develop on the south, with a linear form from the west to the east. The basic reason was the presence of water reservoirs and forest areas at the northern part of the city. However, within 1950s, huge immigration flow from the rural to urban parts of the country dramatically affects Istanbul, and therefore, the city expanded in an uncontrollable way. The fringes of the city were developed by illegal houses which were mostly situated on forest areas and nearby water reservoirs. Today, Istanbul, as a metropolitan city, is consuming several of its natural sources for new development. Regarding the proposed canal project and new settlement which are planned to locate on the northern part of Istanbul are likely to cause vast environmental problems in the future. The only forest areas are remained in the northern part of the city. Either in the analytical studies or in the Master Plan of Istanbul, these forest areas have been designated as "absolutely protected". Meanwhile, again in the same region, abandoned quarries and mines are present. Some of these date back to Byzantine ages and filled up with water, forming a chain of lakes. According to the speech of

PM Erdogan, these areas will be evaluated either for new settlements or recreational activities. It is certain that, with such great investment in housing and business, the forest areas will be under threat and pressure of new direction of development. The southern part of the western bank of the city is covered by fertile agricultural land and crucial under-water reservoirs.

The canal is likely to cut the continuity of these ecosystems and propagate negative impacts of development through adjacent areas. On the southern part of the city, at the potential locations of entrance of the proposed Canal, there are two lagoon type lakes called Büyükçekmece and Küçükçekmece which are significant ecological assets under urban pressure (Istanbul Master Plan Analytical Studies, 2006), and are protected by the Master Plan of Istanbul. Another challenge rises due to the unique geography and the hydrodynamics of the Straits system throughout the Dardanelles and the Bosphorus.




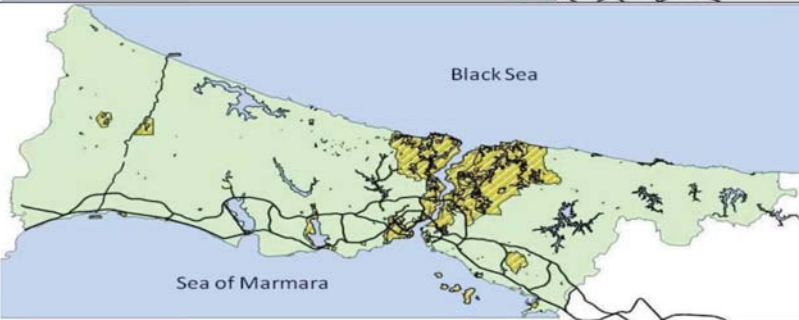
Saydam (2011) points that due to the unique geography of the region, and the differences of the salinity levels between the Mediterranean and the Black Sea, the Bosphorus Strait generates a kind of food chain in the Sea of Marmara, which consumes large amounts of oxygen that supports many fish species. If the Canal is built, he claims that it might trigger another food generator mechanism, which in turn would consume the little oxygen left in the Sea of Marmara, and therefore might lead to the end of the life in the Marmara Sea.

He explains that currently in most of the Marmara Sea fish species can only live at the first 25 m from the surface, and this is already a tiny layer. The system evolved naturally and came to balance 3500 years ago, but if a Canal is built, the whole system may not be able to adapt. It would be one of the largest man-made disasters in the history of mankind, according to this article. Demirel (2011) claims that according to the literature of zoogeography, it is estimated that 500 species of the Red Sea invade the Mediterranean due to the Suez Canal. There are also Mediterranean species that

Southern entrance of the Bosphorus Strait.





	<p>Forest Areas to be absolutely protected (The term "absolutely protected" has been quoted from the reports of Istanbul Master Plan, 2006). (a)</p>
	<p>Agricultural Areas to be absolutely protected (b)</p>
	<p>Underground Water (c)</p>
	<p>Protected Sites (archeological – natural – urban) (d)</p>

Sensitive Natural and Cultural Assets in Istanbul.

invaded the Red Sea. However, she cannot provide any potential threats due to the ongoing degradation of fish species in the Black Sea and Sea of Marmara since 1950s, and due to the un-clear state of the so called "Canal Istanbul" project.

*Challenges Associated with Preservation of Cultural Heritage*

Istanbul and surrounding areas have a history more than 5000 years as human settlements.

Consequently, besides protected zones regarding natural values, there are several archeological ruins along the region. The eastern coast of the west bank of Istanbul is covered by natural protected areas, while at the western

bank, there are ruins of Anastasian walls from Byzantine Empire during the late 5<sup>th</sup> century. Moreover, above mentioned Küçükçekmece Lake is important not only because of its natural features, but also because of cultural heritage, such as cave settlements from the pre-historical times, lighthouse ruins and the ruins of a city dating back to antiquity. Summing up, several assets susceptible to any kind of disruption are located in the undeveloped part of Istanbul in the west bank.

Even though the southern part of the city is under the threat of an earthquake, it does not seem to be a good way to expand the city through the north where there are sensitive eco-systems.



Vessel traveling from the Black Sea to the Sea of Marmara.

### Speculation on the implementation approach

Since it is possible only to speculate about the economic functions and size of the Canal Project up to date, we can solely say that the Canal might either serve or undermine these targets. The problem with the project is that it is not clear if it will serve mainly to international maritime transportation or will enable a local integration of highly flexible and fast production systems, or if it will merely be a canal to help in creating new smaller copies of the city of Istanbul through speculative and non-productive real estate development projects. Thus, it becomes impossible to evaluate potential benefits to the economy as a whole. Depending on past experience, it is more likely that the project will likely serve speculative investments rather than contribute in strengthening and deepening the competitive advantages of the regional and national economy. The extremely high building and operation costs of such a project and the current turmoil in the global economy point that the initiative might introduce strong complications on the national and local economy.

The size and scope of the project given may either trigger a rapid development of the city, or just undermine current real estate markets due to oversupply. After the global

economic crisis in year 2008, the development of the real-estate market today seems to be less ambitious unlike the boom of post 2002. The current market is a patchwork of both successful new real estate developments as well as large unsuccessful developments with poor urban services and poor performance in terms of valuation. The way the canal project is articulated around the newspapers and blogs by the opponents points that the main motivation behind it could be land speculation and a contribution to the real estate bubble rather than solving logistics and transportation problems.

#### *Financial Model*

As discussed in the first section, "The Crazy Project Canal Istanbul" is a massive complex project with expensive transportation infrastructure and facilities, urban functions and recreational elements. In the speech it was announced that there is no necessity to use national funds for the project, which is a hint of intentions to use international credit. Up to date, most of the infrastructure projects in Istanbul are financed by Japanese International Cooperation Agency (JICA), World Bank, European Bank for Reconstruction and Development (ERDB), and Islamic Development Bank. It has been recently announced by

Historical buildings along the Bosphorus Strait.







Residences on the Bosphorus shore.

the newly established Ministry of Environment and Urbanism that the new Financial Centre of Istanbul at the Anatolian Side will be built for attracting Islamic Banks, and Islamic Development Bank funds may be used for the construction. It was addressed that Build and Operate (BO), Build, Operate and Transfer (BOT) models would be used and entrepreneurs should be involved in. Hints are given in the speech that the costs will be covered by the income to be created through marketing and/or operation of residential buildings, touristic facilities, congress and cultural centers, office buildings, shopping malls, tolls of motorways and bridges, port and airport taxes and fares.

*A Developing Country Classic: By-Passing Environmental Regulations*

However, there have been recent samples that by the decision of government, some projects were exempted of this necessity, and this lead to hot public debate. A very recent example is the 6.5 billion USD motorway project between Istanbul and Izmir passing through highly sensitive natural reserve Uluabat Lake in Bursa a designated RAMSAR area since year 1998. Being a highly praised project by PM Erdogan, this project has been kept exempt from an Environmental Impact Assessment (EIA) study. The decision to execute an assessment was given by the Ministry of Environment and Forestry according to the Directive of Environmental Impact Assessment. According to article 5, of both the 2003 version and the updated 2008 version of this directorate, the ministry is responsible for deciding whether if such an assessment is required and whether if the project's assessment is positive or negative. However, the Ministry can transfer his authority to the provincial Mayor if seen necessary. It is well known that motorways have significant impacts on the environment, but the Izmir – Istanbul project was kept exempt from an EIA by the Ministry, although it crosses the Uluabat Lake, and requires establishment of large quarries in multiple locations for construction materials. Not surprisingly, this in turn created

anger among local people of Bursa, as well as the Turkey's Association of Chambers of Architects, Planners and Engineers (TMMOB) and the case was taken to court (Evrensel, 2011). Izmir Bar Association took the case to the court, and there was an academic reaction from Bursa, during a symposium held recently between 22<sup>nd</sup> - 24<sup>th</sup> of September, 2011. The record of the government also includes examples of exemption from EIA for a variety of other infrastructure such as hydroelectric power plants to be built in environmentally sensitive areas.

In his speech about Canal Istanbul, PM Erdogan declared that the feasibility study of the project is planned to be accomplished in the next two years and according to the feasibility reports the path of the canal will be planned, but he made no mention about an EIA Study.

Furthermore, after the elections, the government abolished the Ministry of Environment and Forestry, the Ministry of Construction and Development, and the Deputy of the State Planning Organization: the clashing institutions on urban and regional planning and established the Ministry of Environment and Urbanism, the Ministry of Forestry and Water and The Ministry of Development.

It may be seen as an attempt to increase central government's capacities and power to impose such projects which face strong public resistance. Due to such large scale institutional changes, a new legislative gap is created, and therefore significant changes on the management and protection of cultural and environmental sites have been initiated by the government. This raises questions on how sensitive the government will be to the environment and cultural heritage in the implementation, because according to accumulated maps in the media the project overlaps with vast areas of forest that are to be absolutely protected, as designated in the Master Plan of Istanbul.

We tried to overlap one of the images provided in an article about the Canal Istanbul, published in the newspaper HaberTürk<sup>4</sup> recently. We used real GIS data on the



Intra-city sea traffic in the Bosphorus.

designated forest protection areas in the Master Plan of Istanbul, and overlapped the image provided by the newspaper by georectification process. There was no reference to the source of the image in the newspaper. After the georectification process, we observed that the green areas belonging to the Treasury of Turkey perfectly match the designated forest protection areas in the Master Plan. Strikingly, in the news, it was praised that about 96.4% of the area will be freely acquired for construction since it is publicly owned. Thus, to our opinion this news strongly reduces the credibility of the project about its sensitivity on environmental assets.

### Conclusion: Istanbul as winner or loser?

The promotion of the Canal Istanbul Project has provoked several discussions among professionals and lay people. The ideas have been polarized as; "this is a crazy project which will create great shifts in Turkey by the means of rapid development" and "this is a crazy project which will overload of the city and destroy all natural sources of Istanbul". Great investments are surely great catalysis to improve local/national economy and quality of life. Considering the expected benefits from the Canal Istanbul Project and investments around the surrounding area, the question arises on how Istanbul will receive advantages due to this project. It is imposed that by the completion of this project, Istanbul will be more attractive for FDI. The complementary investments may accelerate economic growth of the country. Consequently, new settlement nearby the Canal Istanbul may be developed as a prestigious gated community. Quality of life of the residents may be enhanced by with divers infrastructural and service facilities. Nevertheless, development of all these attractions seems as a Dubai type of development rather than to remove pressures on Istanbul. For instance, it is not likely that present residents of Istanbul will move to new settlement, because mostly this settlement will serve to the people working at new finance center which will be established nearby the Canal. If the settlement will be designed as a prestigious zone for housing, consequently, people who have been urged to move from the risky zones

of the city will not likely afford the cost of life in the new settlement. Due to the large scale of the investment, the third bridge will be used by the additional carrier traffic and commuting, therefore this new transportation structure will not able to ease the current traffic, as it is claimed by the proponents of the third bridge, who are led by the PM Erdogan. Anytime the advantages and disadvantages of a great investment are assessed, natural values should have a priority. However, in several cases, natural environment is sacrificed for the sake of economic and urban development and short to medium term benefits. In the case of the Canal Istanbul Project, the fragile balance of sensitive ecosystems seems to face great un-repairable damages in long run. One may claim that the proposed project is only focused on the north-eastern side of the western bank of Istanbul. Even though this claim is true, the planned route of the third bridge and its connection roads are passing the northern shore of the city through forest areas and water basins. As experienced several times in Turkey, when a transportation route is built, new residential areas will develop immediately nearby.

The 70s and 80s are the periods when Istanbul dramatically expanded through the northern part due to the construction of the first and the second bridges respectively. The first visible damages were seen on the quality and the quantity of the water supplied by water reservoirs of the city. The quality has turned to non-potable water and the quantity has got lower as the reservoirs were not able to be fed by precipitation because of the land covered by concrete (buildings) and asphalts. Other natural resources have received damage as well. The ecological continuity of forest areas has been disrupted by development of small settlements.

On the other hand, fertile agricultural land nearby to Istanbul has been converted to built-up areas. Despite all development which has eroded the natural resources of Istanbul, there are still some remaining zones protected by the current regulations and law. However, it seems that some of these zones will lose their special status to be consumed for the Canal Istanbul Project.

We may clearly note that, even if the project is able to provide a sharp increase in economic vitality, disruption and

contamination of natural life may create serious problems in the future of the city.

Subsequently, great expectations for the future wealth and development are embedded in the project, nonetheless, natural resources of Istanbul will lose through this global/national economic development battle.

Under these circumstances, we believe that the project should be carefully monitored both by the people as well as NGOs and professional organizations to put pressure on the regulating and executive bodies whether public or private, so as to ensure that the project does not bypass regulations that target preservation of cultural and environmental assets, and does not cause economic losses of the current residents in the region.

Due to its size, and its unique location, the project should be carefully followed also by international watchdogs. Last but not the least, projects of such importance, and

size, should be announced to public, only after a careful study is made about its feasibility and potential impacts on economy, environment and social structure are adequately defined.

#### Notes

- <sup>1</sup> The administrative border of the Province of Istanbul and the Greater Municipality of Istanbul has become identical due to a legislative change in year 2006.
- <sup>2</sup> In a newspaper the population of the new dwelling areas are claimed to be approximately 700.000 inhabitants.
- <sup>3</sup> This is regulated by other conventions, with some freedom that Turkey enjoys, since such day to day implementation details are not provided within the Montreux Convention.
- <sup>4</sup> Because of the copyright, we are not able to publish this map. Ref: Haber Türk 2011.

#### References

- Corinth Canal (2011) <http://www.aedik.gr/frontend/index.php?chlang=EN>
- Demirel, N., 2011, "Denizlerarası Yapay Kanallar ve Ekosistem", (Artificial Canals Between Seas and the Ecosystem) Bilim ve Gelecek, June 2011, pp.26-30, ISSN: 1304-6756
- DHMI, Devlet Hava Meydanları İşletmesi Genel Müdürlüğü (General Directorate of State Airports Authority), [www.dhmi.gov.tr](http://www.dhmi.gov.tr)
- Erdogan, R.T. (2011), "Briefing of the Turkish Prime Minister, Recep Tayyip Erdogan" 27.04.2011
- Erkut, G. and Baypınar, M., 2007, "Istanbul, Odessa and Regional Integration", *The Black Sea Region: Past, Present and Future*, eds. Stephen MITCHELL and Gülden ERKUT, British Institute of Archaeology at Ankara, Londra, İngiltere, ISBN 978 1 898249 21 4 Publisher: Oxbow, Britain
- Erkut, G. and Baypınar, M.B. (2009), "Emerging Global Integration Zones in the EU and Turkey's Spatial Integration", *Studies in Regional Science*, Vol.39 No.1 pp.67-88 The Journal of the Japan Section of the RSAI (JSRSAI) PRINT ISSN 0287-6256: Sasaki Printing & Publishing.
- Evrensel, 2011, "ÇED Muafiyetine Dava", Evrensel Journal internet site, 21<sup>st</sup> April 2011, <http://www.evrensel.net/news.php?id=4612>
- HaberTürk, 2011, "Yeni İstanbul" (New Istanbul), 10<sup>th</sup> September, 2011, <http://www.haberturk.com/yasam/haber/668053-yeni-istanbul>
- Istanbul Master Plan Analytical Studies (2006)
- Istikbal, C. (2007) "Turkish Straits: Is it a sustainable oil route?", Black Sea Oil and Gas Summit, Istanbul 5-6 November 2007.
- Kiel Canal (2011) <http://www.kiel-canal.org/english.htm>
- Mehlbye, P., 2000, "Global Integration Zones – Neighbouring Metropolitan ARegions in Metropolitan Clusters", Informationen zur Raumentwicklung, Heft 11/12.2000, pp.755-762
- Panama Canal (2011), <http://www.pancanal.com/eng/index.html>
- Saydam, A.C., 2011 "Çılgın Proje Neden Olmaz?" (Why the Crazy Project Can't Be?) Bilim ve Gelecek, June 2011, pp.16-25, ISSN: 1304-6756
- Suez Canal (2011) <http://www.suezcanal.gov.eg/sc.aspx?show=12>
- Undersecretariat for Maritime Affairs, [www.denizcilik.gov.tr](http://www.denizcilik.gov.tr)
- Yılmaz, O.F. (2010). "Beş Asırlık Kanal Projesi" (Channel Project for the last five centuries), *Yediköy*, no: 18, pp: 12-21, February 2010.

#### Image sources

The figure at pg. 53 is by <http://commons.wikimedia.org>; the figures at pg. 54, 56, 57, 59 have been elaborated by the Authors; the figures at pg. 55 are screen shots from the presentation of PM Erdogan, 2011; the picture at pg. 58 (below) is by Baypınar, 2011; the pictures at pg. 58, 60,61, 62 are by Kundak, 2011.