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INTEGRACIJA IRAČKOG LUČKOG SUSTAVA U SVJETSKE POMORSKE TOKOVE

INTEGRATION OF THE IRAQI'S PORT SYSTEM INTO WORLD MARITIME FLOWS

SAŽETAK

Integriranje luka, odnosno lučkog sustava u pomorske robne tokove uvjetovano je brojnim čimbenicima kao što su: geoprometni, društveno-gospodarski, tehničko-tehnološki, organizacijski i drugi čimbenici. Stoga, analiza i planiranje uspješnog i racionalnog uključivanja iračkog lučkog sustava u svjetske pomorske tokove iziskuje analizu svih spomenutih čimbenika i fenomena konkurentnosti lučkog sustava te njihovo vrednovanje u prisutnim okolnostima. Uvažavajući značaj navedenih čimbenika, izučavanje trenutnog stanja i budućih mogućnosti integriranja iračkog lučkog sustava u svjetske pomorske tokove, u ovome se radu temelji na analizi: vanjskotrgovinske i prekomorske razmjene Iraka, analizi intenziteta i dinamike prometa u glavnim iračkim lukama, te analizi položaja iračkih luka s obzirom na glavne pravce pomorskih robnih tokova i s obzirom na vodeće pomorske regije i pročelja. Posebna pažnja posvećena je analizi tokova nafte (tekućih tereta) u svijetu u funkciji integracije iračkih luka u svjetske pomorske tokove. Kao rezultat istraživanja, utvrđene su mjere, aktivnosti i konkretne smjernice za integraciju iračkog lučkog sustava u svjetske pomorske tokove.

Ključne riječi: irački lučki sustav, integracija, pomorski robni tokovi

SUMMARY

Integration of the ports, or rather the port system, in maritime cargo flows depends on many factors: geographic, socioeconomic, technical, technological, and organizational, among others. Therefore, planning a successful and rational integration of the Iraqi's port system into the world maritime flow requires an analysis of all the mentioned factors and phenomena of the competitiveness of the port system and its value under present circumstances. Respecting the above mentioned factors, analysis the present situation and the next integration possibilities of the Iraqi port system, in this paper is based on the analysis of the Iraqi's foreign and overseas trade, analysis of the traffic intensity and dynamics in the main Iraqi's port, their position on the important routes of maritime cargo flows respecting the leading maritime regions and worldwide frontrunners. Special attention is devoted to the analysis of the worldwide flow of oil (liquid cargo) as a function of integrating Iraqi's ports into the worldwide maritime flow. As results this paper gives concrete measures, activities and direction for the further integration of the Iraqi's port system into the world maritime flow.

Key words: *Iraqi's port system, integration, world maritime flows*

1. UVOD

Značajan čimbenik prometnog i gospodarskog razvitka Iraka predstavlja integriranje iračkog lučkog sustava u svjetske pomorske tokove, pri čemu planiranje konkurentnosti iračkog lučkog sustava podrazumijeva prioritetni zadatak u ostvarenju toga cilja.

S obzirom da u postojećoj situaciji iračkog lučkog sustava postoje brojna ograničenja, ali i niz pozitivnih pretpostavki u ostvarenju spomenutog cilja, osnovna je svrha i cilj ovog istraživanja istaknuti relevantne značajke iračkog lučkog sustava s gledišta geoprometnih i društveno-gospodarskih značajki o kojima direktno ili indirektno ovisi mogućnost njegove integracije u svjetske pomorske tokove.

Budući da okosnicu iračkog gospodarstva čini proizvodnja i izvoz nafte koja predstavlja glavno bogatstvo Iraka, geoprometnom analizom pomorskih tokova nafte u radu se analizira i istražuje pozicija iračkog lučkog sustava u odnosu na svjetske tokove nafte, respektirajući glavna tržišta te konkurentno okruženje, odnosno druge države koje raspolažu spomenutim rudnim bogatstvom ili su izvoznici istoga.

Rezultati istraživanja ogledaju se u ocjeni postojećeg stanja te projekciji razvitka iračkog lučkog sustava koji bi svojim konkurentnim obilježjima trebao biti u funkciji jačanja naftnog sektora u Iraku, tj. očekivanog povećanja proizvodnje i izvoza iračke nafte, a time i u funkciji intenzivnog uključivanja u svjetske tokove nafte.

2. RELEVANTNE ZNAČAJKE IRAČKOG LUČKOG SUSTAVA

Osnovne značajke iračkog lučkog sustava analizirane su s obzirom na obilježja iračkih luka, njihovo gravitacijsko područje i pročelje, te s obzirom na tržište i konkurentno okruženje. Ocjenom postojećeg stanja i intenziteta prometa u iračkim lukama dana je projekcija razvitka iračkog lučkog sustava.

2.1. Geoprometni čimbenici stanja i razvitka iračkog lučkog sustava

Irak je država smještena u jugozapadnoj Aziji na sjevernom dijelu Arapskog zaljeva s površinom od 437.072 km². Obuhvaća područje Mezopotamije između rijeka Eufrat i Tigris te

1. INTRODUCTION

A significant factor in the transport and economic development of Iraq represents the integration of Iraq's port system into the global maritime flows, while competitiveness planning represents a priority task in achieving this goal.

Given the current situation of Iraq's port system there are a number of limitations, but also a number of positive assumptions in achieving the aforementioned objectives. Therefore, the primary purpose and objective of this paper is to highlight the relevant features of Iraq's port system from the viewpoint of geographical and socio-economic characteristics, of which directly or indirectly depends the ability of its integration into the global maritime flows.

Since the production and export of oil constitutes the backbone of Iraq economy, and it represents the main wealth of Iraq, geographic analysis of maritime flows of oil in this paper analyzes and explores the position of Iraq's port system in a relation to the global flows of oil (with a respect to the main markets and competitive environment) as well as the other states that dispose of abovementioned mineral resource, or are exporters of the same.

The results of this research are reflected in evaluation of the current situation and the projected development of the Iraq's port system which should, with its competitive characteristics be in the function of strengthening the oil sector in Iraq, namely expected increase in production and exports of Iraqi oil, and also in the function of intensive involvement in the global flows of oil.

2. RELEVANT FEATURES OF IRAQ'S PORT SYSTEM

The main features of the Iraq's port system are analyzed according to the characteristics of Iraq's ports, their front and catchment area, and considering the global market and competitive environment. An evaluation of a current state and intensity of the traffic in the ports of Iraq gave a development projection of the Iraq's port system.

2.1. Geographic factors of a current state and development of Iraq's port system

Iraq is a country located in a Southwest Asia on the Northern Arabian Gulf, with an area of

susjedna planinska i pustinjska područja. Na jugoistoku kratkom obalom (58 km) izlazi na Arapski zaljev. Na jugu graniči s Kuvajtom i Saudijskom Arabijom, na zapadu s Jordanom i Sirijom, na istoku s Iranom i na sjeveru s Turskom (Europom). Dvije glavne rijeke, Eufkrat i Tigris teku kroz Irak od sjevera prema jugu.

Položaj na vrhu Arapskog zaljeva (*Arabian Gulf*), u jugozapadnom dijelu Azije, čini Irak važnom točkom za međunarodnu trgovinu i promet između Bliskog istoka i Europe.

Irak je središnja točka za zračni promet između Europe i Azije. Kao takav spaja sve ceste koje povezuju jug – istok Europe i istočni Mediteran s Arapskim zaljevom na jugu, a s druge strane Europa se spaja s Iranom, Pakistanom i Indijom na istoku. Irak se nalazi u središtu Arapskog zaljeva, država proizvođača nafte. Ta regija sadrži dvije trećine svjetskih naftnih rezervi. Pored velikih količina rezervi nafte Irak je golemi prirodni resurs prirodnog plina, fosfata, sumpora, crvene žive i dr.

Irak je druga zemlja u svijetu po zalihama sirove nafte. Ima zalihe od 143 do potencijalno 250 milijardi barela nafte, odnosno 20% sveukupnih zaliha na Srednjem istoku. Proizvodnja i izvoz sirove nafte sačinjava 95% ukupnog dohotka, što dovoljno govori o njenom značaju za iračko gospodarstvo [10]. Zalihe zemnog plina se procjenjuju na 3,1 trilijun kubičnih metara, što je oko 2% od ukupne svjetske rezerve. Ostali mineralni resursi, uključujući fosfate, procjenjuju se na ukupno 10 milijardi tona.

Irak s 58 kilometara razvedene obale ima izlaz na Arapski zaljev, a time i na glavni svjetski izvozni "bazen" sirove nafte. Različiti makroregionalni geoprometni položaj uzrok je tomu da unutar lučkog sustava Iraka egzistira skupina morskih luka, riječno-morskih luka te naftnih *off shore* terminala što se ujedno odražava na njihov bitno različit prometni položaj i funkciji u odnosu na gravitacijsko zaleđe.

Najveću prometnu važnost u iračkom lučkom sustavu ima sedam luka koje služe međunarodnom prometu, a to su luke: Umm Qasr, Khor Abdulla, Khor Al Zubair, Abu Flus, Al Maakal, te naftni terminali, Al Basra i Khor Al Amaya.

Rijeka Shat Al Arab obuhvaća dvije iračke luke, Abu Flus udaljenu od Arapskog zaljeva 100 km i luku Al Maakal udaljenu od Arapskog zaljeva 120 km (u središtu grada Basre) te je kao takva uzrok postojanju velikog broja luka i lučica.

437,072 km². It covers an area of Mesopotamia between the river of Tigris and Euphrates as well as the neighbouring mountain and desert regions. In southeast, with the short coastline (58 km) exudes on the Arabian Gulf. In the south it adjoins with Kuwait and Saudi Arabia, Jordan and Syria on the west, with Iran on the east, and with the Turkey (Europe) on north. Two major rivers (Tigris and Euphrates) flow throughout Iraq from north towards south.

Position at the top of the Arabian Gulf in the Southwest Asia, makes Iraq an important point for international trade and traffic between the Middle East and Europe.

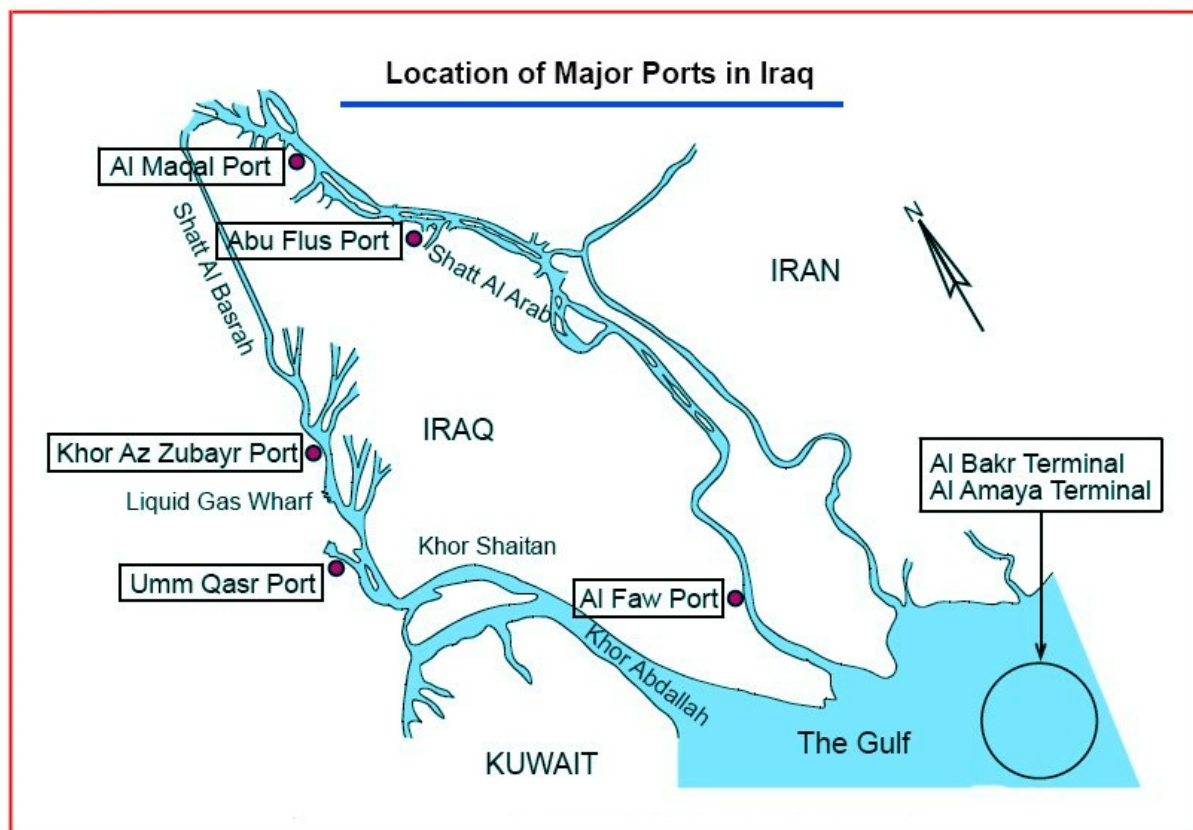
Iraq is the central point for air transport between Europe and Asia. As such, it combines all the roads that connect the Southeast Europe and Eastern Mediterranean to the Arabian Gulf in the south. On the other side (on east) Europe is connected with Iran, Pakistan and India. Iraq is situated in the heart of the Arabian Gulf (oil-producing nations). This region contains two-thirds of world oil reserves. Besides large amounts of oil reserves, Iraq is a vast natural resource of natural gas, phosphates, sulfur, red mercury, etc.

Iraq is a second country in the world according to the reserves of a crude oil. It has reserves of 143 to potentially 250 billion barrels of oil, or 20% of the total stock in the Middle East. Production and export of crude oil constitutes 95% of total income, which confirms its importance for Iraqi economy [10]. Stocks of a natural gas are estimated on 3.1 trillion cubic meters, which is about 2% of total world reserves. Other mineral resources, including phosphates, are estimated to 10 billion tons in total.

Iraq, with its 58 kilometers of indented coastline has an access to the Arabian Gulf, and thus on the world's main export "pool" of crude oil. Various macro-regional geographic positions causes that, within the port of Iraq, exists a group of sea ports, river-sea ports and oil terminals. It also reflects on their very different transit location and function in relation to the gravitational background.

In the port system of Iraq there are seven ports of the greatest importance serving international traffic: Umm Qasr, Khor Abdulla, Khor Al Zubair, Abu Flus, Al Maakal, and the oil terminals Al Basra and Khor Al Amaya.

Zemljovid 1. Glavne iračke luke
 Map 1. The main Iraqi ports



Izvor: www.portsofiraq.com (19.09.2011.)

Source: www.portsofiraq.com (19th September 2011)

Zbirni prometni kapacitet navedenih luka iznosi 12 milijuna tona suhih tereta, što uz kapacitet *off shore* naftnih terminala od oko 38 milijuna tona godišnje, daje ukupni kapacitet od oko 50 milijuna tona suhog i tekućeg tereta. Glavnina ovog prometnog kapaciteta odnosi se na luke Umm Qasar i naftni terminal Al Basra. Sukladno tome spomenute luke predstavljaju najznačajnije iračke luke, a zbog koncentracije prometnih tokova usmjerenih upravo prema tim lukama, pripadajući obalni pojas u kontekstu geopolitičkog položaja predstavlja središnji, najznačajniji lučki prostor Iraka.

Luka Umm Qasr je luka novijeg datuma, koja se danas smatra najjačom iračkom komercijalnom lukom. Smještena u južnom dijelu Iraka, 70 km od centra grada Basre, luka Umm Qasr nalazi se na kanalu Khor Al Zubair, dijelu Abd Allah estuarija koji vodi do Arapskog zaljeva. Trenutno je Umm Qasr najveća luka u Iraku, s 22 veza uključujući i 2 Ro-Ro veza, te 4.442 metra ukupne dužine obale. Podijeljena je u tri područja – sjeverna, srednja i južna luka.

Shatt al-Arab river encompasses two ports of Iraq; Abu Flus – 100 km away from the Arabian Gulf, and the port of Al Maakal – 120 km away from the Arabian Gulf (in the center of Basra). As such, it is the reason for the existence of a large number of ports and harbors.

Cumulative traffic capacity of these ports is 12 million tons of dry goods, accompanied with off-shore oil terminals capacity of about 38 million tons annually, gives a total capacity of 50 million tons of a dry and liquid cargo. The majority of this traffic capacity refers to the port of Umm Qasr and Al Basra oil terminal. Accordingly, these ports are the most important Iraqi's ports, and due to the concentration of a traffic flows directed especially to these ports, the related coastal strip (in the terms of geopolitical position) represents a central, the most important area of Iraqi's port system.

The port of Umm Qasr is a port of a recent date, which is now considered the most powerful Iraq's commercial port. Located in the

Tragična oštećenja u Iransko-iračkom i Zaljevskom ratu te sankcije od strane UN-a, utjecale su na neodržavanje lučkih postrojenja i njihovo propadanje do alarmantne razine. Lučki objekti koji se nalaze na području luke izgrađeni su od strane različitih konzorcija iz zemalja poput Njemačke, Švedske i Libanona, a između ostalog izgrađena je željeznička pruga koja je povezivala luku s gradovima Basrom i Bagdadom i ostalim iračkim gradovima, sve do područja Turske i Europe.

Luka Khor Al Zubair nalazi se u južnom Iraku 45 km od centra grada Basre i 25 km od luke Umm Qasr na kanalu Khor Al Zubair (unutrašnji morski kanal dužine 24 km, iskopan i proširen s namjenom da poveže kanale Khor Al Zubair i Khor Abd Allah) koji je dio Khor Abd Allah estuarija, a vodi do Arapskog zaljeva. Luka je započela s radom sredinom 70-ih godina prošlog stoljeća. Sastoji se od dvanaest pristaništa, a izgrađena je s ciljem da bude industrijska luka i da služi industrijskim područjima koji se nalaze u blizini, te iračkim industrijskim potrebama za uvozom i izvozom. Međutim, u četiri rata koja su se odvijala od 1980. do 2003. godine, tvornice su uništene, tako da je luka Khor Al Zubair postala trgovačka luka za društveno-gospodarske potrebe Iraka.

Luka Al Maagal je riječna trgovačka luka za generalni teret, najstarija je luka u Iraku, izgrađena 1916. godine. Smještena je na zapadnoj strani rijeke Shat Al Arab u blizini centra grada Basre, 100 km sjeverno od Arapskog zaljeva. Luka Al Maagal bila je najveća luka po količini prekrcanog tereta do 1980. godine kada je započeo rat između Iraka i Irana. Sastoji se od trinaest pristaništa, a dužina operativne obale je 2.500 m. Luka Al Maagal nalazi se 500 m od glavnog željezničkog kolodvora u gradu Basri i na taj je način direktno povezana sa svim iračkim željezničkim prugama, kao i s Turskom i Sirijom.

Luka Abu Flus je trgovačka luka za generalni teret. Izgrađena je zbog krize koja je nastala akumulacijom tereta i velikog broja brodova 1974. godine. Smještena na zapadnoj strani rijeke Shat Al Arab, 20 km južno od centra grada Basre i 80 km sjeverno od Arapskog zaljeva, luka Abu Flus sastoji se od tri pristaništa, svaki po 175 m, ukupne dužine operativne obale 525 m. U luku Abu Flus najčešće dolaze mali brodovi iz Dubajja.

Southern Iraq, 70 km from the city center of Basra, the port of Umm Qasr lies on the canal Khor Al Zubair (on a part of Abd Allah Estuary) which leads to the Arabian Gulf. Currently, the port of Umm Qasr is the biggest port in Iraq with 22 connections, including 2 Ro-Ro (Roll-on Roll-off) connections, and 4,442 meters in a total length of a coastline. It is divided into three regions – northern, central and southern port. The ports were tragically damaged during the Iran-Iraq war, the Gulf War and also with the sanctions by the UN, what led to a lack of maintenance and to their decadance to alarming levels. Port facilities (on the port area) were built by different consortiums of the countries such as Germany, Sweden, and Lebanon. Among other things, there was constructed a railroad which connected the port with the cities Basra and Baghdad and the other Iraqi cities, up to the area of Turkey and Europe.

The port of Khor Al Zubair is located in Southern Iraq, 45 km from the city center of Basra, and 25 km from the port of Umm Qasr. It is located on a channel Khor Al Zubair (inland 24 km long sea canal, dug out and expanded with the intention to connect channels Khor Al Zubair and Khor Abd Allah) which is a part of Khor Abd Allah estuary, and it leads to the Arabian Gulf. The port began operations in mid 70-ies of the last century. It consists of twelve piers, and it was built to become an industrial port to serve the industrial areas located nearby, and Iraqi industrial needs for import and export. However, during the four wars that took place from 1980 to 2003, the factories have been destroyed, so the port Khor Al Zubair became a trading port for all socio-economic needs of Iraq.

The port of Al Magal is a river trading port for general cargo and it is the oldest port in Iraq (built in 1916). It is located on the west side of the river Shatt al-Arab (near the city center of Basra), 100 km north from the Arabian Gulf. It was the largest port by volume of loaded cargo until the beginning of Iraq-Iran war (1980). It consists of thirteen piers, and a quay length of 2,500 m. The port Al Maagal is located 500 m from the main railway station in the city of Basra, and thereby it is directly connected with all the railways in Iraq, and also with the Turkey and Syria.

The port of Abu Flus is a trading port for a general cargo. It was built as a result of the cri-

Luka Al Fao nalazi se na poluotoku Al Fao, 100 km južno od centra grada Basre i mjesto je važnih naftnih postrojenja. Značajna je zbog svog strateškog položaja koji omogućuje kontrolu pristupa riječnom plovnom putu Shat Al Arab. Za vrijeme Iračko- iranskog rata 80-ih godina prošlog stoljeća, luka Al Fao se koristila za lansiranje iranskih projektila prema naftnim postrojenjima. No, 1988. godine, Iranci su protjerani te je luka nastavila s radom. Tijekom američke invazije na Irak poluotok Al Fao, a samim time i luka, bili su jedna od prvih meta napada. U planu je izgradnja nove luke Al Fao, koja će biti jedna od najvećih luka na Bliskom istoku.

Uz spomenute glavne iračke luke, irački lučki sustav čine i dva naftna terminala Khor Al Amya i terminal Basra. **Naftni terminal Basra** smješten je u Khor Al Khafnai, južno od terminala Khor Al Amaya. Započeo je s radom 1973. godine, a preko njega se izvozi 80% količine iračke nafte. Ostalu količinu nafte Irak izvozi preko luke Jihan u Turskoj za Mediteran. Trenutno iračka proizvodnja nafte iznosi oko 2,5 milijuna barela nafte dnevno. S ciljem povećanja proizvodnje nafte do 6 milijuna barela dnevno, u planovima je izgradnja još jednog naftnog terminala koji bi mogao izvoziti buduće veće količine nafte. **Morski naftni terminal Khor Al Amya** smješten je u Arapskom zaljevu, 40 km južno od iračke obale. Terminal se sastoji od pet prirodnih otoka međusobno povezanih mostovima.

S obzirom na situaciju koja je prisutna u Iraku već tri desetljeća, statistički podaci o prometu iračkih luka teško su dostupni, te se u sljedećim tablicama navode raspoloživi podaci o prometu luka za razdoblje 2005.–2009. godine, te podaci o prometu (izvoz nafte) dvaju naftnih terminala.

Iz podataka o prometu iračkih luka razvidno je da najveći značaj ima luka Umm Qasr, koja sama bilježi intenzitet prometa jednak onome kojega ostvaruju preostale tri glavne luke zajedno. Dinamika prometa luke Umm Qasr je u konstantnom blagom rastu, dok ostale luke u promatranom razdoblju bilježe određene varijacije u količini prometa, a u posljednjim godinama i pad prometa.

Promet naftnih terminala, posebice terminala Basra dominantan je u ukupnom prometu iračkih luka. Slijedom toga terminal Basra

sis that has caused the accumulation of cargo and a large number of ships in 1974. It is located on the west side of Shatt al-Arab river, 20 km south of the city center of Basra, and 80 km north of the Arabian Gulf. The port of Abu Flus consists of three piers (each 175 m long) with a total quay length of a 525 m. In the port of Abu Flus are usually coming a small boats from Dubai.

The port of Al Faw is located on Al Faw peninsula, 100 km south of the city center of Basra. It is a place of important oil installations. It is significant due to its strategic location which allows access control to the Shatt al-Arab river fairway. During the Iraq – Iran war, 80's of the last century, the port of Al Faw was used for launching missiles to the Iranian oil facilities. However, in the year of 1988 the Iranians were displaced, and the port continued to work. During the U.S. invasion on Iraq, Al Faw peninsula (and thus the port) was among the first targets of attack. The future plan is to build a new Al Faw port, which will be one of the largest ports in the Middle East.

In addition to aforementioned main ports of Iraq, the Iraqi's port system also consists of two oil terminals, Khor Al Amaya and Al Basra. Al Basra Oil Terminal is located in the Khor Al Khafnai, south of Khor Al Amaya terminal. It began operations in 1973, and it exports over 80% of Iraqi oil. The remaining amount of oil Iraq exports through the port of Jihan in Turkey, for the Mediterranean. Current Iraqi oil production is around 2.5 million barrels of oil per day. In order to increase oil production to 6 million bbl/d (barrels per day), the future plan is to build another terminal for oil export in large amounts. Maritime oil terminal Khor Al Amya is located in the Arabian Gulf, 40 km south of the Iraq's coast. The terminal is consisted of five natural islands connected by bridges.

Given the situation that is present in Iraq for three decades, the statistics about the Iraq's port traffic are hardly available, so the following table lists the available figures about the port traffic (for the period from 2005 to 2009), and the traffic data (oil exports) of two oil terminals.

From the traffic data of Iraqi's port traffic it is clear that the port of Umm Qasr is most important Iraq's port, which itself captures the in-

Tablica 1. Promet robe u iračkim lukama u razdoblju 2005.–2009. godine (u tonama)**Table 1.** Transportation of goods in Iraq ports in the period from 2005 to 2009 (in tons)

	LUKA PORT	2005	2006	2007	2008	2009
1.	Umm Qasr	4.361.965	7.720.340	5.986.941	7.418.215	7.613.860
2.	Khor Al Zubair	1.200.443	4.195.722	4.161.914	3.876.048	3.113.533
3.	Abu Flus	480.270	544.668	692.960	549.743	551.044
4.	Al Maggal	–	–	42.065	10.055	47.096
UKUPNO / TOTAL		6.042.678	12.460.730	10.883.880	11.854.061	11.325.533
	NAFTNI TERMINAL OIL TERMINAL					
1.	Basra terminal	–	–	45.830.484	37.869.539	30.692.978
2.	Khor Al Amaya terminal	–	–	1.190.367	1.127.860	658.512
UKUPNO / TOTAL		–	–	47.020.851	38.997.399	31.351.490

Izvor: The General Company of Iraq Ports

Source: The General Company of Iraq Ports

opravdano je smatrati glavnim potencijalom kada je u pitanju integracija iračkog lučkog sustava u svjetske pomorske tokove. Dakle, luka Umm Qasr, luka Khor Al Zubair i naftni terminal Basra predstavljaju najvažniji segment iračkog lučkog sustava, pri čemu je očigledna dominacija naftnog terminala Basra u prometu tekućih tereta, odnosno izvozu nafte.

2.2. Gravitacijsko područje, pročelje i konkurentno okruženje iračkih luka

Poznata je činjenica da je konkurentnost luke određena gravitacijskim područjem i pročeljem luke, u uvjetima konkurentnog okruženja.

Jasna analiza gravitacijske lučke zone preduvjet je za pravilno djelovanje i organiziranje lučkih sustava, za donošenje valjanih mjera poslovne i lučke politike i osnovno je polazište za izradu svih razvojnih planova. Takva analiza daje uvid u to je li luka iskoristila sve mogućnosti privlačenja tereta ili ima još neiskorištenih rezervnih potencijala. Gravitacijsko područje (*engl. hinterland*) ili zaleđe luke može podrazumijevati ne samo jednu ili više regija, nego i susjednih država. Međutim, u kontekstu iračkog lučkog sustava utjecaj političke situacije i odnosa Iraka s graničnim državama, ima za posljedicu da je gravitacijska zona svih iračkih luka uglavnom svedena samo na iračke pokrajine, njihovu razvijenost i gospodarstvo te na njihovu prometnu povezanost s lukama.

U tom kontekstu, iračke luke imaju dobre gravitacijske uvjete za terete potrebne za Irak. Njihovi gravitacijski uvjeti bolji su od gravitacij-

tensity of traffic equal to a traffic generated by the remaining three major ports together. Its traffic dynamics is in constant slight increase, while other ports in observed period record some variations in amount of traffic, and also (in recent years), a traffic decline.

The traffic of oil terminals (especially Al Basra) is dominant in the total turnover of Iraqi's ports. Consequently, Al Basra Oil Terminal is justifiably considered the main potential when it comes to integration of Iraqi's port system into the global maritime flows. Therefore, the port of Umm Qasr, Khor Al Zubair and Al Basra Oil Terminal are the most important segment of the Iraqi's port system, with the apparent dominance of Basra oil terminal in the transport of a liquid cargo, meaning oil exports.

2.2. Catchment area, frontispieces, and the competitive environment of the Iraqi's ports

It is well established that the competitiveness of the port is designated by a catchment area and its facade, in terms of a competitive environment.

A clear analysis of ports gravity zone is a precondition for proper functioning and organization of the port system, for making a valid business and policy measures, and it is a basic starting point for all development plans of the port. Such an analysis provides insight into whether the port used all attracting cargo possibilities or has a spare unused potential. Catchment area (hinterland) or port inland may involve not just one or more regions, but also

skih uvjeta jordanskih i sirijskih luka iz razloga što su iračke luke bliže iračkim gradovima, nego jordanske i sirijske, a također je i željeznički i cestovni promet jeftiniji od iračkih luka do iračkih gradova.

U svezi s pročeljem iračkih luka, treba istaknuti da redovite linijske veze iračke luke održavaju najvećim dijelom samo s lukama u regiji, a najviše s lukom Dubai. Uz putnički promet tu je i Ro-Ro promet između luke Umm Qasr i drugih međunarodnih luka od 1995. godine, a glavina tereta su žitarice, kontejneri, cement, šećer, željezo i građevinski materijali. Kako je glavni irački proizvod sirova nafta, tako i prijevoz sirove nafte uvelike predodređuje na neki način pročelje iračkih luka, pri čemu se ne radi samo o prijevozu sirove nafte prema Dalekom istoku, već i o razvozu unutar Zaljeva. Glavnina izvoza sirove nafte ipak ide prema lukama Japana, Južne Koreje, Kine, SAD-a i Zapadne Europe.

Za poslovanje i razvitak luke važan je domaći promet iz nacionalne vanjskotrgovinske razmjene, budući da je to siguran teret na koji se može računati te relativno točno mogu planirati količine i strukture toga prometa. Međutim, domaći supstrat, u pravilu, nije dovoljan za optimalno iskorištenje lučkih kapaciteta i osiguranje većeg razvitka te je prijeko potrebna afirmacija na stranom tržištu i nastojanje da se iz zemalja u zaleđu pridobije što više tereta. Ovakvu potrebu potvrđuje i općepoznata konstatacija da je tranzitni promet nerobni izvoz koji stvara devizne prihode i omogućuje privlačenje znatnih količina tereta, kao bitan preduvjet za jači razvitak luke i upošljavanje kapaciteta.

U suvremenim uvjetima bitna su osnovna logistička načela svjetskog prometnog tržišta za odabir prometnog toka robe. Važno je naglasiti da kretanje i definiranje robnih tokova te razvoj pojedinih prometnih pravaca danas u velikoj mjeri određuju multinacionalne kompanije i veliki brodari prema svojim interesima.

Iračke luke u konkurenciji su s jordanskim i sirijskim lukama. Kako bi smanjile njihovu konkurentnost, iračke luke nužno moraju povećati kapacitete svojih luka te poraditi na stabilizaciji političke situacije kao i državne sigurnosti.

Kao što je i prije spomenuto, proizvodnja sirove nafte čini okosnicu iračkog gospodarstva. Međutim, turbulentna situacija koja traje već 30 godina u tom području značajno je promije-

neighboring countries. However, in the context of Iraq's port system, the influence of the political situation (and relations with its border states) has the effect that the gravity zone of Iraq ports is mainly confined to the provinces of Iraq, its development and economy, and their traffic connection with the ports.

In this context, the ports of Iraq have a good gravity conditions for required loads. Their gravity conditions are better than the gravity conditions of Jordanian and Syrian ports (since they are closer to the cities of Iraq than the ports of Jordan and Syria) and also, the rail and road transport is cheaper from Iraq ports to Iraq cities.

Along with a passenger transport there is Ro-Ro transportation between the port of Umm Qasr and the other international ports since 1995, and it mainly refers to grain, container, cement, sugar, iron and building materials. Since crude oil is the main product of Iraq, therefore the crude oil transportation largely predetermines its port frontispieces, whereby it is not only about the transportation of crude oil as per the Far East, but also transportation within the Gulf. However, the majority of crude oil exports are heading towards the ports of Japan, South Korea, China, USA and Western Europe.

A significant factor for a port development and its business activity is a share of a domestic traffic in a national foreign trade (since it is a safe load that can be counted on) and the amount and the structure of this traffic can be planned rather accurate. However, the local substrate is usually not sufficient for optimal utilization of port capacities and for significant development assurance. The affirmation on a foreign markets is necessarily required, as well as the recruitment of the cargo from the hinterland countries to the fullest possible extent. This requirement is confirmed by a general observation that the transit traffic represents a non-commercial export which creates foreign currency revenues and allows the attraction of substantial amounts of goods, as an essential precondition for a stronger port development and a capacity placement.

In modern terms, the main matter of concern for a traffic flow selection is the basic logistics and world market principles. It should be noted that the movement and the definition of com-

nila sliku tržišta Iraka. Iračke luke kroz koje ide glavina izvoza sirove nafte, bile su uglavnom prazne.

Treba spomenuti i tzv. cjevovodni promet jer je posljednjih 10-ak godina glavina sirove nafte bila izvezena kopnenim cjevovodima i to najviše iz Kirkuka prema turskoj luci Ceyhan na Mediteranu te sirijskoj luci Banias.

Naftovod Kirkuk – Ceyhan dug je 970 km i sastoji se od dvije cijevi promjera 1.170 i 1.020 mm. Kapacitet naftovoda je 100 – 500 tisuća barela na dan. Naftovod je bio oštećen 2009. godine, ali je nakon popravka ponovno u funkciji. Naftovod Kirkuk – Basra s cjevovodom dužine oko 900 km ima kapacitet oko jedan milijun barela na dan, zahvaljujući čemu ima epitet “strateške linije”. Naftovod Kirkuk – Banias u Siriji je dug 800 km te je kroz cijev promjera 500 mm imao kapacitet od 300 tisuća barela na dan. Izgrađen je 1952. godine, ali je 2003. tijekom invazije na Irak oštećen i od tada nije u upotrebi. Razlog više za korištenje naftovoda prema turskoj luci Ceyhan i prije toga prema sirijskoj luci Banias leži u tome što se u glavne izvozne luke nije ulagalo i praktički su stagnirale više od 20 godina tijekom svih ratova i nemira u regiji.

U okruženju Iraka, a s izlazom na more, su države Kuvajt s jedne i Iran s druge strane. Kuvajt kao jedanaesta najbogatija zemlja svijeta i peta po zalihama sirove nafte sa svojih 300 km obale predstavlja veliku konkurenciju i izazov za iračko gospodarstvo i iračke luke. Kao takva predstavlja plodno tlo, kako za domaće tako i za strane ulagače. S druge strane je Iran čija obalna crta iznosi 1.770 km, a proteže se cijelom istočnom stranom Arapskog zaljeva te nastavlja dijelom Omanskog zaljeva. Naime, Iran je četvrti po redu svjetski proizvođač nafte i drugi najveći izvoznik sirove nafte od članica OPEC-a, također predstavlja značajnog konkurenta Iraku. Ujedno, osim nafte, Iran također raspolaže velikim rezervama zemnog plina, po kojima je na ljestvici čak drugi u svijetu.

2.3. Društveno-gospodarski čimbenici stanja i razvitka iračkog lučkog sustava

U gospodarskom razvoju svake države, pa tako i Republike Iraka, važnu determinantu predstavlja prometni sustav. Jednako tako, nesporno je da promet i prometna infrastruktura izravno pridonosi aktiviranju gospodarskih po-

modity flows, and the development of transport routes are largely determined by the multinational companies and a large shipping companies according to their interests.

The ports of Iraq are in direct competition with the Jordanian and Syrian ports. In order to reduce their competitiveness, Iraqi's ports must increase their capacity, and stream towards the political and national security stabilization.

As already mentioned, a crude oil production is a backbone of Iraqi economy. However, the turbulent situation in that area that lasts yet for 30 years has significantly changed the image of Iraqi market. The ports of Iraq, with major contribution in a crude oil export, were mainly empty.

The so-called *pipeline transport* should also be mentioned, forasmuch as in the last 10 years the majority of crude oil was exported by overland pipelines, mostly from Kirkuk towards Turkish port of Ceyhan on the Mediterranean, and to the Syrian port of Banias.

Oil pipeline Kirkuk – Ceyhan is 970 km long and it is consisted of two pipes, with the diameter of 1170 mm and 1020 mm. The capacity of the pipeline is 100 – 500 thousand bbl/d (barrels/day). In 2009 the pipeline was damaged, but after the reparation it is back in function. The Kirkuk – Basra with its pipeline length of about 900 km has a capacity of about one million bbl/d, and it is consequently called “the strategic line”. Kirkuk – Banias in Syria is 800 km long pipeline, and through the tube with the diameter of 500 mm had a capacity of a 300 thousand bbl/d. It was built in 1952, but during the invasion on Iraq (2003) was damaged, and since then it is out of use. One more argument for using the pipeline towards a Turkish port of Ceyhan and the Syrian port of Banias, is the lack of investments into the main ports for export, so they practically stagnated for more than 20 years, during all wars and unrests in the region.

In the environment of Iraq there are two countries with the access to the sea: Kuwait in one and Iran on the other side. As eleventh richest country in the world (and fifth by a crude oil reserves) the state of Kuwait with its 300 km long coastline represents a great competition and a challenge for economy of Iraq and its ports. As such, it represents fertile ground for both domestic and foreign investors.

tencijala, a prihodi prometnog sustava imaju znatan udio u strukturi BDP-a države.

Jedno od temeljnih načela koje se ističe, između više različitih načela prometne politike, je ono koje se odnosi na povezanost prometa i gospodarskog sustava. Navedeno se načelo temelji na stajalištu prema kojemu postoji jaka međusobna povezanost prometne djelatnosti s procesom proizvodnje onih roba čije se mjesto potrošnje ne podudara s mjestom njihove proizvodnje. Stoga se na temelju takve povezanosti utvrđuju osnovne tendencije u razvitku prometa i određuje politika njegova budućeg razvitka.

Povezanost prometa i gospodarskog sustava izražava se kretanjem osnovnih ekonomskih indikatora, kao što su: društveni proizvod, zaposlenost, investicije, ili osobna potrošnja s jedne strane te količina prevezene robe i putnika, veličina prometne mreže, broj i sastav prijevoznih sredstava s druge strane. Elastičnost veličine prijevoza putnika i roba dosta je uobičajen način kvantitativnog utvrđivanja spomenute povezanosti koja pokazuje u kojoj se mjeri mijenja prirast u količini prijevoza robe ili putnika, zavisno od, primjerice, promjena u visini društvenog proizvoda ili nacionalnog dohotka [19].

Postoje različita stajališta o dinamici razvitka prometa u odnosu na gospodarski sustav. Tako bi se prema jednima promet trebao razvijati sporije od razvoja proizvodnih djelatnosti, dok bi se prema drugima trebao uspostaviti ujednačen rast spomenutih djelatnosti. Nasuprot tome, logična je i strategija prema kojoj bi razvitak prometa, posebice prometne infrastrukture, trebao prethoditi razvitku proizvodnih djelatnosti, čime bi promet stvorio temeljne preduvjete za brži i kvalitetniji gospodarski razvitak.

Slijedom spomenutih teorijskih postavki o povezanosti prometnog i gospodarskog sustava, u sljedećoj se tablici daju podaci o osnovnim indikatorima gospodarskog stanja Iraka koji upućuju na stanje i razvoj prometa.

Iračko je gospodarstvo bilo teško oštećeno za vrijeme Iračko-iranskog rata (1980.–1988.), a međunarodne sankcije nametnute nakon arapskog Zaljevskog rata 1991. godine bile su još jedan veliki udarac. Osim tih događaja, rekonstrukcija održive ekonomije početkom 2000. godine susrela se s jako lošim sustavom. Gospodarska moć bila je isključivo u rukama političke elite. U tim okolnostima, privatni sektor

From the other side, the state of Iran with its 1,770 km long coastline extends throughout the eastern side of the Arabian Gulf, and partly continues within the Gulf of Oman. In fact, Iran is the fourth world's oil producer and second largest OPEC member by crude oil export, and as such it represents a significant competitor to the state of Iraq. Except for oil, Iran has got large reserves of natural gas according which it is ranked second in the world.

2.3. Socio-economic factors of the Iraqi's port system situation and development

In the economic development of every country, (including the Republic of Iraq) a transport system represents an important determinant. Similarly, there is no doubt that the traffic and transport infrastructure contributes the activation of the economic potential, and therefore the revenues of the transport system have a substantial interest in the structure of a country's GDP.

The most fundamental transport policy principle that stands out (among others) is one that refers to the connection between the traffic and economic system. The above mentioned principle is based on a standpoint that there is a strong interconnection between the traffic services and the process of production of those goods whose place of consumption does not coincide with the place of their production. Therefore, upon that relationship are establishing basic tendencies in traffic development, and determines the policy of its future development.

Connection between traffic and economic system is expressed by the movement of the main economic indicators such as a social product, employment, investments or personal consumption on the one hand, and the quantity of goods and passengers, the size of the transport network, the number and composition of transport, on the other. The elasticity of the size of goods and passengers is quite the usual way of quantitative determination of abovementioned connection, which shows the extent to which changes the increment in the amount of transported goods or passengers, depending on, for example, changes in the amount of gross domestic product or national income.

There are different views about the dynamics of a traffic development in a relation to the

Tablica 2. Ekonomski pokazatelji iračkog gospodarstva
Table 2. Economic indicators of the Iraqi economy

	2002	2003	2004	2005	2006	2007	2008	2009
BDP (u bil. USD) <i>GDP</i> (in bill. USD)	18,97	20,28	25,76	31,3	45,07	56,98	86,52	65,84
god. % promjene BDP-a <i>Annual % of changes in GDP</i>	-7,8	-41,3	46,5	-0,7	6,2	1,5	9,5	4,2
BROJ STANOVNIKA (u tis.) <i>POPULATION</i> (in thousands)	27.000	27.540	28.091	28.653	29.226	29.810	30.406	31.014
VANJSKOTRGOVINSKA RAZMJENA <i>FOREIGN EXCHANGE</i>	22.036	19.645	39.112	47.229	50.253	62.784	95.300	76.500
Izvoz, mil. USD <i>Export, mil. USD</i>	12.219	9.711	17.810	23.697	29.361	41.268	62.300	39.500
Uvoz, mil. USD <i>Import, mil. USD</i>	9.817	9.934	21.302	23.532	20.892	21.516	33.000	37.000
Saldo VTR, mil. USD <i>Foreign trade balance, mil. USD</i>	2.402	-223	-3.492	165	8.469	19.752	29.300	2.500

Izvor: <http://stat.wto.org> (19.09.2011.)

Source: <http://stat.wto.org> (19th September 2011)

bavi se uglavnom ilegalnim gospodarskim aktivnostima. Budući da je iračko gospodarstvo uvelike ovisilo o industriji nafte, daljnji napredak zavisio je od stope po kojoj se industrija mogla rekonstruirati i reintegrirati na svjetsko tržište nafte.

U 2006. godini ekonomski razvoj u Iraku ovisio je prvenstveno o poboljšanju sigurnosne situacije, koja uvelike koči gospodarski napredak. Većina značajnih poduzeća ostala je u rukama države. Kada je stalna vlada preuzela dužnost početkom 2006. godine njezini kratkoročni planovi bili su smanjenje proračunskog deficita, diverzifikacija gospodarstva kroz privatizaciju i smanjenja nezaposlenosti. Međunarodne subvencije i ulaganja postaju važan izvor financiranja takvih ciljeva. Privatizacija, koja se suočila s velikim otporom, ostvaruje se u postupnim fazama. Irak je podnio zahtjev za članstvo u Svjetskoj trgovinskoj organizaciji 2004. godine, ali nije bio prihvaćen do sredine 2006. godine.

Slijedom podataka iz tablice 2 razvidno je da proporcionalno s porastom stanovništva (3% godišnje), posljednjih godina Irak bilježi značajan rast BDP-a. Takva kretanja odražavaju se i na rast prometa, odnosno vanjskotrgovinske razmjene prometa.

Stanje i razvitak iračkog gospodarstva prvenstveno je uvjetovano i određeno proizvodnjom i prodajom nafte, koja čini oko 90% ukupnog

economic system. So according to some, traffic should develop more slowly than the development of productive activities, while according to others should establish a uniform increase in these activities. Also logical, in contrast, is the strategy according to which the traffic development (transport infrastructure in particular) should precede the development of productive activities which would create the basic conditions for faster and better economic development.

Following these theoretical assumptions about the relationship between transport and economic system, the following table presents the figures of the main indicators of economic stage of Iraq, which indicate the traffic status and development.

Iraqi economy was heavily damaged during the Iran-Iraq war (1980 – 1988), and the international sanctions imposed after the Arabian Gulf war in 1991 were also another major stroke. Besides these events, the reconstruction of a sustainable economy in early 2000 has met a very bad system. Economic power was exclusively in the hands of political elite. In these circumstances, the private sector is mainly engaged in illegal economic activities. Since the Iraqi economy is highly dependent on oil industry, further progress depended on a rate to which the industry is able to reconstruct, and reintegrate into the world oil market.

iračkog dohotka. Stoga su zabrinjavajuće činjenice o trenutnom ograničenju prometa nafte zbog oštećenja infrastrukture za ekstrakciju i transport nafte te zbog sigurnosnog stanja u zemlji. Dakle, u iračkim lukama veliki problem predstavljaju društveno-politički čimbenici: veličina i gospodarska razvijenost zaleđa, prometna povezanost sa zaleđem i prekomorskim prostorom, tehnička opremljenost luka te politika i ratni čimbenici.

Unutar makroekonomskih pokazatelja, značajan pokazatelj dinamike, vrijednosti, količine i usmjerenosti robnih tokova je vrijednost **vanjskotrgovinske robne razmjene Iraka** sa svijetom. Statistika robne razmjene s inozemstvom obuhvaća svu robu koja se izvozi iz zemlje, odnosno uvozi u zemlju. Izvoz obuhvaća svu robu koja se izvozi iz Iraka, a potječe iz domaće proizvodnje ili unutarnjega robnog prometa. Uvoz obuhvaća svu robu koja je uvezena iz inozemstva radi potrošnje u zemlji ili radi unutarnje proizvodnje. Osim komercijalnih transakcija (uz naplatu), obuhvaćena je i roba čiji se promet, tj. izvoz i uvoz, obavlja bez plaćanja protuvrijednosti.

Prema podacima o vanjskotrgovinskoj razmjeni Iraka (izvoz i uvoz u mil. USD), uočava se znatniji porast uvoza i izvoza u Iraku od 1997. godine, pri čemu se ističe dominacija izvoza i prisutna dinamika njegova rasta u promatranom razdoblju.

3. GEOPROMETNA ANALIZA STANJA I MOGUĆNOSTI INTEGRIRANJA IRAČKOG LUČKOG SUSTAVA U SVJETSKE POMORSKE TOKOVE

O važnosti međunarodnog pomorskog prometa svjedoči činjenica da se više od 80% ukupnog međunarodnog robnog prometa obavlja pomorskim putem. Stoga, biti integriran u svjetske pomorske tokove za svaku luku, odnosno lučki sustav znači konkurentnu prednost, odnosno mogućnost ravnopravnog konkuriranja na globalnom tržištu, osiguravajući tako prosperitet za luku, te cjelokupni prometni i gospodarski sustav države. U tom smislu, u ovom se dijelu rada analizira stanje i mogućnost integriranja iračkog lučkog sustava u svjetske pomorske tokove, respektirajući posebice mogućnost integriranja u svjetske tokove tekućih tereta kao realno stanje i mogućnost.

In 2006 economic development of Iraq was primarily depended on improving the security situation, which greatly decreases the economic progress. Most major companies remained in State hands.

When a permanent government took office in early 2006, its short-term plans were reducing the budget deficit and the diversification of economy through privatization and reduction of unemployment. International grants and investments become an important source of finance for such purposes. Privatization which was faced with great opposition is achieved in gradual stages. In 2004 Iraq has applied for membership in the WTO, but was not accepted until mid-2006.

According to the information from the Table 2, in a proportion with the increase of population (3% per year) in recent years, Iraq has recorded a significant growth in GDP. These trends are also reflecting on a traffic growth, meaning foreign exchange transactions.

The current state and development of Iraqi economy is primarily conditioned by the production and sales of oil, which constitutes about 90% of Iraq's income. Therefore, the current traffic limits (as a result of damages of oil infrastructure for the extraction and transport of oil, and the security situation in the country) are representing very alarming facts. Consequently, the ports of Iraq have major socio-political problems: the size and economic development of hinterland, transport connections with the hinterland and overseas regions, technical infrastructure and port policy, and a war factors.

Within the macroeconomic factors, an important indicator of a dynamics, value, quantity and the orientation of commercial flows represents the value of **Iraq's foreign trade with the world**. Statistics on foreign trade includes all the goods exported from the country or imported into the country. Export includes all the goods exported from Iraq, which came from domestic production, or internal trade. Import includes all the goods imported from abroad for the purpose of consumption in the country, or for internal production. Besides commercial transactions (transactions with surcharge), it includes the goods whose trade (exports and imports) are done without paying the equivalent.

According to data on foreign trade of Iraq (exports and imports) there is a significant in-

3.1. Geoprometna analiza svjetskih tokova nafte

Podaci o strukturi prekomorske međunarodne trgovine (Tablica 3.) govore o velikom značaju tekućih tereta, tj. nafte usporedno s ostalim vrstama tereta. Naime, danas tokovi nafte u ukupnoj prekomorskoj trgovini čine značajnih 35%, dok je u prijašnjim godinama to bila gotovo polovica ukupne prekomorske trgovine. Stoga, biti na važnim pravcima tokova nafte, podrazumijeva značajno participirati u svjetskoj pomorskoj trgovini, a i ukupnoj svjetskoj razmjeni.

U geoprometnoj analizi svjetskih tokova nafte treba istaknuti da pomorski putovi na Indijskom oceanu povezuju luke južne i jugoistočne Azije i Australije s europskim i afričkim lukama te s lukama Dalekog istoka, a posebnu važnost daje im prijevoz golemih količina nafte iz Arapskog zaljeva. Ti se putovi sijeku u nekoliko važnih pomorskih prolaza: Hormuz i Bab el Mandab (Sueski kanal), te Malačkom (Sundskom i Lombočkom prolazu) i Bassovom prolazu.

Glavni pravci trgovanja naftom u 2010. godini koji su prikazani na zemljovidu 2., potvrđuju da je glavno svjetsko izvoriste nafte Saudijska Arabija. Većina tokova nafte iz tog dijela svijeta prema konzumentima odvija se pomorskim putem, pri čemu se kao jedan od najvažnijih pravaca ističe pravac prema istoku, odnosno prema Japanu i Kini, SAD-u te pravac prema Europi. Bitno izvoriste tokova nafte je i Rusija koja naftom opskrbljuje veliki dio Europe te SAD i Kinu.

Osnovno obilježje svjetskih tokova nafte je činjenica da su pravci formiranja te vrste toko-

crease on imports and exports since 1997, whereat it points out the dominance of exports and present dynamics of its growth in observed period.

3. GEOGRAPHIC ANALYSIS OF A STAGE, AND THE OPPORTUNITIES OF INTEGRATION OF IRAQI'S PORT SYSTEM INTO THE GLOBAL MARTIME FLOWS

The importance of international maritime transport is evidenced by the fact that more than 80% of total international trade of goods is carried out by the sea. Therefore, integration into the global maritime flows for each port (or a port system) is a competitive advantage or an equal ability to compete in the global market, thereby ensuring the prosperity of the port and the entire transport and economic system of the country. Consequently, this section analyzes the situation and the ability to integrate the Iraqi's port system into the global maritime flows, in particular respecting the ability for integration into the global maritime flows of liquid goods as a realistic situation and possibility.

3.1. Geographic analysis of the world oil flows

The figures about the structure of overseas international trade (table 3) shows a great importance of liquid goods (oil) compared with the other types of goods at the same time.

Tablica 3. Razvoj prekomorske međunarodne trgovine (u mil. tona)
Table 3. Development of an international overseas trade (in million tons)

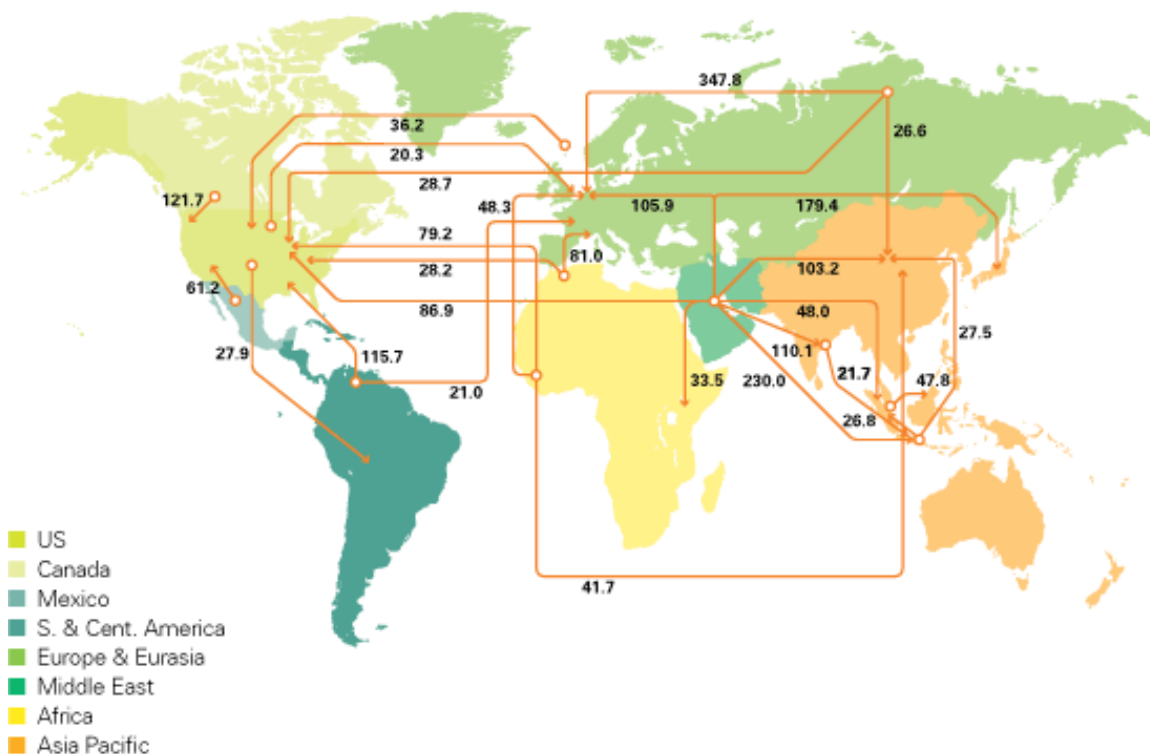
Godina <i>Year</i>	Nafta <i>Oil</i>	Glavni rasuti teret <i>Main Bulk cargo</i>	Ostali suhi teret <i>Other Dry cargo</i>	Ukupno <i>Total</i>
1970	1.442	448	676	2.566
1980	1.871	796	1.037	3.704
1990	1.755	968	1.285	4.008
2000	2.163	1.288	2.533	5.984
2006	2.825	1.888	3.009	7.886
2007	2.899	2.013	3.164	8.136
2008	2.906	2.097	3.322	8.272
2009	2.835	5.073		7.908

Izvor: www.unctad.org, Review of Maritime Transport, 2010.
Source: www.unctad.org, Review of Maritime Transport, 2010

Zemljovid 2. Vodeći svjetski naftni tokovi 2010. godine
 Map 2. Major world oil flows of the year 2010

Major trade movements 2009

Trade flows worldwide (million tonnes)



Izvor: www.bp.com (19.09.2011.)

Source: www.bp.com (19th September 2011)

va uvjetovani rasporedom izvorišta nafte u svijetu, odnosno najvećim proizvođačima, izvoznicima te uvoznicima nafte. Drugim riječima, najvažniji tokovi nafte formiraju se na pravcima od država velikih proizvođača ili izvoznika do država velikih potrošača. Pritom treba istaknuti da najveći proizvođači nafte, odnosno države koje raspolažu tim energetske bogatstvom, ne moraju ujedno uvijek biti i najveći izvoznici nafte. Slijedom toga, u geoprometnoj analizi svjetskih tokova nafte, podaci o državama najvećim izvoznicima i uvoznicima nafte predstavljaju značajne pokazatelje intenziteta i glavnih pravaca te vrste tokova.

Glavni proizvođači nafte, uključujući zemlje OPEC-a zapadne Azije, najbogatija su područja sirove nafte od kojih su neke zemlje s gospodarstvima u tranziciji. U regionalnom smislu, to su: Južna i Istočna Azija, Središnja Afrika, sjeverna i istočna morska obala Južne Amerike, Sjeverna Afrika, Zapadna Afrika, Karibi i Srednja Amerika te europske zemlje na Sjevernom moru (Norveška i Švedska).

Namely, oil flows nowadays make significant 35% of a total overseas trade, while in previous years was almost the half of it. Therefore, attending the important directions of oil flows implies to a significant participation in a world overseas trade, and also in a total world trade.

In geographic analysis of the world oil flows should be noted that the Indian Ocean maritime routes connect the ports of South and Southeast Asia and Australia with an European and African ports and the Far East ports, and they are especially significant because of the major amounts of oil transport from the Arabian Gulf. These pathways intersect at several important maritime passages: Hormuz and Bab el Mandab (Suez Canal), Mallaka (Sunda and Lombo passage) and the Bass passage.

The main oil trading directions in 2010 shown on the map 2, confirm that Saudi Arabia is a central world source of oil. Majority of oil flows from that part of the world to consumers is carried out through the maritime routes

Tablica 4. Najveće izvoznice i uvoznice nafte u svijetu 2009. godine
Table 4. The world largest exporters and importers of oil in 2009

R. br. No.	Zemlja Country	Izvoz (000 barela/dan) Export (000 barrels/day)	Zemlja Country	Uvoz (000 barela/dan) Import (000 barrels/day)
1.	Saudijska Arabija <i>Saudi Arabia</i>	8,406	SAD <i>U.S.</i>	10,984
2.	Rusija <i>Russia</i>	6,874	Japan <i>Japan</i>	4,652
3.	Ujedinjeni Arapski Emirati <i>United Arab Emirates</i>	2,521	Kina <i>China</i>	3,858
4.	Iran <i>Iran</i>	2,433	Njemačka <i>Germany</i>	2,418
5.	Kuvajt <i>Kuwait</i>	2,390	Južna Korea <i>South Korea</i>	2,144
6.	Norveška <i>Norway</i>	2,246	Indija <i>India</i>	2,078
7.	Angola <i>Angola</i>	1,948	Francuska <i>France</i>	1,915
8.	Venezuela <i>Venezuela</i>	1,893	Španjolska <i>Spain</i>	1,534
9.	Alžir <i>Algeria</i>	1,888	Italija <i>Italy</i>	1,477
10.	Nigerija <i>Nigeria</i>	1,883	Tajvan <i>Taiwan</i>	939
11.	Irak <i>Iraq</i>	1,769	Singapur <i>Singapore</i>	925
12.	Libija <i>Libya</i>	1,597	Nizozemska <i>Netherlands</i>	891
13.	Kazahstan <i>Kazakhstan</i>	1,185	Belgija <i>Belgium</i>	706
14.	Kanada <i>Canada</i>	1,089	Turska <i>Turkey</i>	629
15.	Katar <i>Qatar</i>	1,085	Tajland <i>Thailand</i>	572

Izvor: Review of Maritime Transport, 2010.

Source: Review of Maritime Transport, 2010

Države najveći proizvođači nafte (Alžir, Indonezija, Irak, Iran, Kuvajt, Libija, Nigerija, Katar, Saudijska Arabija, Ujedinjeni Arapski Emirati i Venezuela) udružene su u interesnu organizaciju OPEC (*Organization of Petroleum Exporting Countries*) koja zajedno proizvodi oko 40% ukupne svjetske proizvodnje nafte, a u zalihama ima tri četvrtine ukupno potvrđenih zaliha u svijetu. Među državama najvećim proizvođačima nafte posebice se ističu: Saudijska Arabija (10,37 milijuna barela), Rusija (9,27 milijuna barela), Sjedinjene Američke Države (8,69 milijuna barela), Iran (4,09 milijuna barela), Meksiko (3,83 milijuna barela) i Irak (2,60 milijuna barela) [8].

whereat the one of the most important directions of above mentioned line points is one eastward, meaning the one towards Japan and China, United States, and the line towards Europe. Russia is also quite important source of oil flows, and it supplies a big part of Europe, as well as the U.S. and China.

The main characteristic of world oil flow shows in a fact that the line directions for these types of flows are conditioned by formation of oil sources in the world, with reference to the largest producers, exporters and importers of oil. In other words, the most important flows of oil are formed on a direction from a large pro-

Među glavnim državama izvoznicama nafte su: Saudijska Arabija, Irak, Kuvajt, Iran, Ujedinjeni Arapski Emirati, Katar, Oman, Indonezija Alžir, Libija, Nigerija, Venezuela, Norveška i Švedska.

Zemlje izvoznice nafte su u jedinstvenom položaju jer imaju koristi od svjetske potražnje za naftnim proizvodima. Petnaest najvećih zemalja izvoznica i uvoznica nafte u svijetu prikazane su u tablici 4. Među navedenim zemljama samo Rusija, Norveška i Meksiko nisu članice OPEC-a te stoga imaju ograničenu riječ u postavljanju cijena nafte u svijetu.

Na ljestvici država najvećih izvoznika nafte Irak se nalazi na 11. mjestu. S obzirom na predviđeni očekivani rast proizvodnje nafte u budućnosti, Irak bi trebao i povećati svoj značaj u svjetskim tokovima nafte, odnosno pomaknuti se na ljestvici najvećih izvoznika za popriličan broj mjesta. U prilog tome ide i činjenica da su Bliski i Srednji istok ujedno prostori gdje su procijenjene i najveće količine zaliha nafte, pri čemu se posebice ističe Saudijska Arabija s 264,2 milijarde barela zaliha. Slijede Kanada sa 179, Irak koji zauzima treću poziciju sa 143 milijardi barela, te Iran sa 126 milijardi barela.

Analizirajući najveće potrošače nafte u svijetu, SAD je sa skoro 20 miliona barela potrošnje nafte dnevno, daleko najveći potrošač nafte u svijetu s kojim se ne može usporediti niti jedna druga država. To je razlogom da SAD, kao glavno tržište naftom i naftnim derivatima, predstavlja jednu od najutjecajnijih sila na svijetu. Saudijska Arabija, inače najveći proizvođač nafte, nakon kojega slijede Rusija i SAD, po potrošnji se nalazi tek pri dnu ljestvice s 1,36 milijuna barela dnevno. S obzirom da SAD svojom proizvodnjom nafte pokriva samo 39% svojih potreba, prisiljeni su na veliki uvoz nafte, pri čemu su Meksiko i države Bliskog i Srednjeg istoka glavni izvoznici nafte za potrebe SAD-a.

3.2. Relevantni indikatori integriranosti iračkih luka u svjetske pomorske tokove

Kao i mnogi drugi resursi, zalihe nafte podliježu promjenama koje se odnose na nova otkrića i na ekonomsko-političke odnose. Već od početka 20. stoljeća pronađena je nafta u Iraku te je započeta njena eksploatacija. Prve količine nafte iz Iraka izvezeno su 1927. godine preko luke Al Fao u Basri. Od tog trenutka iračke

ducer or exporter states, to the major consumer countries. It should be noted that the largest oil producers and the countries that have that energy wealth available, should not always be the largest exporters of it. Consequently, geographical analysis of world oil flows, and the figures related to the country's largest exporters and importers of oil, is representing the important indicators of the intensity and the main directions of these types of flows.

The main oil producers (including the Western Asia countries members of OPEC) are the richest areas of crude oil. In regional terms, these are: the Southern and Eastern Asia, Central Africa, northern and eastern coastline of South America, North Africa, Western Africa, the Caribbean, and Central America, North Sea countries of Europe (Norway and Sweden).

The largest oil producers (Algeria, Indonesia, Iraq, Iran, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates and Venezuela) are merged in the interest organization of OPEC (Organization of Petroleum Exporting Countries), which together produces about 40% of total world oil production, and on its stock has three quarters of the total of confirmed reserves in the world. Among the largest oil-producing countries in particular stand out: Saudi Arabia (10.37 million barrels), Russia (9.27 million barrels), United States (8.69 million barrels), Iran (4.09 million barrels), Mexico (3.83 million barrels) and Iraq (2.60 million barrels) [8].

Among the major oil exporting countries are: Saudi Arabia, Iraq, Kuwait, Iran, United Arab Emirates, Qatar, Oman, Indonesia, Algeria, Libya, Nigeria, Venezuela, Norway and Sweden.

Oil exporting countries are in a unique position to benefit from global demand for oil products. Fifteen largest exporters and oil importers in the world are shown in Table 4. Among these countries, only Russia, Norway, and Mexico are not members of OPEC, and therefore they have limited influence in setting the prices of oil in the world.

On the scale of the largest states in oil exports, Iraq is on the 11th place. Given the projected growth in oil production expected in the future, Iraq should also increase its importance in the global flows of oil and move up on the ladder of leading exporters for quite a few places. In addition, Near and Middle East are areas with the largest estimated oil reserves (espe-

luke bile su integrirane u svjetske pomorske tokove te postale dio svjetskih tokova nafte

Sadašnja prekomorska izvozna iračka sirova nafta čini 80% iračkih *off shore* naftnih terminala u Arapskom zaljevu (Basra naftni terminal i Khor Al Amaya terminal), a 20 % se izvozi kroz tursku luku Sihan. U 2008. godini struktura izvoza sirove iračke nafte bila je za SAD 41%, Aziju (Kina i Japan) 34%, Europu 24% i Afriku 1%.

Analizirajući usmjerenost tokova iračke nafte treba istaknuti tri glavne pomorske rute:

- prva pomorska ruta proteže se od iračkih luka preko Arapskog zaljeva kroz morski tjesnac Hormuz, Arapsko more, morski tjesnac Bab Al Mendub, Crveno more, Sueski kanal, Mediteran, europske luke na Mediteranu, Gibraltar, sjevernoeuropske luke pa sve do istočnih američkih luka;
- druga pomorska ruta preko luke Sihan, luke u Turskoj, Mediterana, europskih luka na Mediteranu, Gibraltara, sjevernoeuropskih luka pa sve do istočnih američkih luka;
- treća pomorska ruta od iračkih luka preko Arapskog zaljeva kroz morski tjesnac Hormuz, preko Indijskog oceana te morskog tjesnaca Malaga do Kine i japanskih luka.

Iste rute iračke sirove nafte protežu se od iračkih naftnih terminala preko Arapskog zaljeva kroz morski tjesnac Hormuz preko Indijskog oceana pa sve do Indije.

Irak je u 2009. bio 12. najveći proizvođač nafte u svijetu i ima jednu od najvećih rezervi nafte u svijetu. Pritom treba istaknuti da se samo dio iračkih naftnih polja crpi, te da postoji nekoliko područja s ogromnim (poznatim i nepoznatim) rezervama koje su slabo iskorištene. Irački energetske sektor temelji se na nafti, a o značaju nafte za iračko gospodarstvo govori podatak prema kojemu je 2009. godine izvoz nafte sudjelovao s dvije trećine u BDP-u Iraka.

Irački naftni sektor trpio je tijekom proteklih nekoliko desetljeća zbog ratova i sankcija, a naftnoj je infrastrukturi potrebna modernizacija i velika ulaganja.

Irak ima dva naftna terminala: Basru i Khor Al Amaya. Basra je najveći naftni terminal s dva cjevovoda (48 inča i 41 inča) i četiri veza kapaciteta 400.000 barela/dnevno, opremljenim za rukovanje s vrlo velikim tankerima (VLCC – *Very Large Crude Carrier*).

cially Saudi Arabia with 264.2 billion barrels of oil reserves). Furthermore, Canada has 179 billion barrels, followed by Iraq with 143 billion barrels, and Iran with 126 billion barrels.

By analyzing the largest consumers of oil in the world, the United States are by far the largest consumer with nearly 20 million barrels of oil consumption per day, which cannot be compared to any other country. This is the reason that the United States (as the main market for oil and petroleum products), represent one of the most influential force in the world. Saudi Arabia, which is the biggest oil producer (followed by Russia and United States) is placed at the bottom by consumption of 1.36 million barrels per day. Since U.S. oil production covers only 39% of their needs they are forced to an imports in big amounts, whereat Mexico and the countries of the Near and Middle East represent the main exporters of oil for the U.S.

3.2. Relevant indicators of integration of the Iraqi's ports into the world maritime flows

Like many other resources, oil stocks are subject to changes related to new discoveries and the economic and political relations. The oil in Iraq was found at the beginning of 20th century, and since then it is exploitable. The first quantities of oil from Iraq were exported in 1927, across the port of Al Faw in Basra. From that moment on, the ports of Iraq were integrated into the global maritime flows and became part of the world's flows of oil.

The current overseas crude oil export of Iraq accounts for 80% of Iraq's offshore oil terminals in the Arabian Gulf (Basra and Khor Al Amaya Oil Terminal), and 20% is exported through the Turkish port of Sihan. In 2008, the structure of crude oil export for U.S. was 41%, for Asia (China and Japan) 34%, Europe 24%, and Africa 1%.

While analyzing the directions of oil flows in Iraq, there are three main maritime routes that should be pointed out:

- first maritime route extends from the ports of Iraq through the Arabian Gulf, throughout the strait of Hormuz, the Arabian Sea, the strait of Bab El-Mendeb, Red Sea, Suez Canal, Mediterranean, European ports in the Mediterranean, Gibraltar, Northern European ports, up to the Eastern U.S. ports;

Terminal Al Basra je iračka naftna luka. Smješten je jugoistočno od poluotoka Al Fao u Arapskom zaljevu. Al Basra naftni terminal se češće odnosi na ABOT (*Al Basrah Oil Terminal*) kao i na njegov sestrinski terminal Khor Al Amaya Oil Terminal (KAAOT). Oni su na platformama s kojih se velika većina iračke nafte može izvesti. ABOT i KAAOT su glavni terminali za eventualnu financijsku stabilnost Iraka.

Štete učinjene na naftnom terminalu Basra za vrijeme Zaljevskog rata velikim su dijelom sanirane, te je promet terminala u 2004. godini prosječno iznosio oko 1,6 milijuna barela dnevno. Propusni kapacitet terminala Basra je 85.000 barela po satu (oko 2 milijuna barela na dan), što je značajno iznad trenutnog prometa od oko 50.000 barela po satu (oko 1,2 milijuna barela na dan), a to znači da postoje znatne rezerve od nominalnog kapaciteta u isporuci nafte.

Basra ima efektivni kapacitet od 1,5 milijuna barela dnevno te može podržati dolazak VLCC-a. U veljači 2009. dodijeljen je projekt povećanja kapaciteta terminala postavljanjem četiriju bova kapaciteta 800.000 barela dnevno svakako bi se trebao, ukoliko bude dovoljno sredstava, realizirati do 2013. godine.

Ministarstvo nafte u Iraku započelo je projekt za uskladištenje nafte izgradnjom osam skladišta ukupnog kapaciteta od 350.000 barela, na poluotoku Faw u južnom Iraku.

Terminal Khor Al Amaya bio je teško oštećen tijekom Iransko-iračkog rata i operacije Pustinjska oluja 1991. Početkom ožujka 2004. Khor Al Amaya otvoren je za izvoz nafte, s početnim kapacitetom od 12.000 barela po satu (300.000 – 400.000 barela na dan). Nakon realizacije konačnog osposobljavanja ovoga terminala očekuje se kapacitet od 1,2 milijuna barela na dan.

Irak posjeduje znatan dio svjetskih rezervi nafte, ali je bio u nemogućnosti povećati proizvodnju nafte u prijašnjim godinama zbog puno konflikata i geopolitičkih nemira. Pretpostavlja se da će ipak doći do rasta naftnog sektora u Iraku do 2035. godine. Razlog tome je povećanje političke i sigurnosne situacije u zemlji te brojni projekti koje je iračko naftno ministarstvo ugovorilo sa stranim kompanijama. Pretpostavljeni rast proizvodnje nafte do 2017. je na 2,8 milijuna barela po danu te 6,1 milijuna barela po danu do 2035. godine.

- the second maritime route through the port of Sihan, port in Turkey, Mediterranean, European ports in the Mediterranean, Gibraltar, Northern European ports up to the Eastern U.S. ports;
- the third maritime route from the ports of Iraq across the Arabian Gulf, throughout the sea Strait of Hormuz, over the Indian Ocean and the sea strait Malaga to the China and Japanese ports.

The same routes of Iraqi crude oil stretch out from its oil terminals across the Arabian Gulf through the sea Strait of Hormuz over the Indian Ocean, up to India.

In 2009, Iraq was the 12th largest oil producer in the world, and it has one of the world's largest oil reserves. It should be noted that only a part of oil fields in Iraq are pumped, and that there are several areas with a huge (known and unknown) reserves that are underutilized. Iraq's energy sector is based on oil, and the importance of oil for the Iraqi economy is demonstrated by the fact according to which the export of oil contributed with two thirds of GDP in Iraq, in 2009.

Iraq's oil sector has suffered over the past few decades because of wars and sanctions, and therefore the oil infrastructure is in need of modernization and great investments.

Iraq has 2 oil terminals: Al Basra and Kor Al Amaya. Al Basra is Iraq's largest oil terminal, with two pipelines (48-inch and 41-inch), plus four 400,000 bbl/d (barrels/day) capacity berths capable of handling very large crude carriers (VLCCs).

Al Basra Oil Terminal is an Iraqi oil port. It lies southeast of the Al Faw peninsula in the Arabian Gulf. Al Basra Oil Terminal is more commonly referred to as "ABOT" and it, along with its sister terminal, the Khor Al Amaya Oil Terminal or "KAAOT", provides platforms from which a large majority of Iraq's oil can be exported. ABOT and KAAOT are the main terminals in Iraq's eventual economic stability.

Gulf War damage to Basra appears to have been repaired in large part and the terminal reportedly was handling around 1.6 million bbl/d in 2004. Basra's nameplate loading capacity is 85,000 barrels per hour (around 2 million bbl/d), which is significantly above current capacity of about 50,000 barrels per hour (around 1.2 million bbl/d), suggesting that there are potentially higher volumes of oil than the nameplate capacity could be shipped out of the port.

S obzirom na pretpostavljeni rast proizvodnje nafte i aktivnosti koje su u tom smjeru poduzete te s obzirom na činjenicu da je Iraka sa 143 milijardi barela dokazanih rezervi nafte na trećem mjestu u svijetu, postoje osnove pretpostavke za intenzivnije uključivanje iračkog lučkog sustava u svjetske tokove tekućeg tereta. Pritom, naravno irački lučki sustav mora moći i znati odgovoriti spomenutim izazovima, te se u tom kontekstu u sljedećem dijelu elaboriraju neke od važnijih pretpostavki razvitka iračkog lučkog sustava.

4. OCJENA POSTOJEĆEG STANJA I PROJEKCIJA RAZVITKA IRAČKOG LUČKOG SUSTAVA

Nesporno je da je u posljednjih 30 godina došlo do značajnog pada lučkog prometa, čiji su razlozi rezultat različitih objektivnih i subjektivnih čimbenika, od kojih bi ponajprije trebalo istaknuti sljedeće:

- iračke morske luke, a ponajprije luka Al Maa-gal, su tijekom tridesetih godina propustile važan investicijski ciklus ulaganja u suvremene kapacitete i tehnologije; u istom se razdoblju u susjedne arapske luke (Kuvajt i Ujedinjeni Arapski Emirati) ulagalo u modernizaciju i izgradnju novih kapaciteta;
- neodgovarajuće i zastarjele željezničke i neke cestovne prometnice razlog su preusmjeravanja prometa u bliže susjedne ili čak znatno udaljenije arapske luke;
- ratna događanja (tri rata) na prostoru Iraka jako su utjecala na skretanje prometnih tokova u druge luke (Kuvajt, Ujedinjene Arapske Emirate, Jordan, Siriju i Tursku);
- nepostojanje konzistentne pomorske i lučke politike, koja potiče razvitak jedne ili dviju luka, te nedefinirani proces litoralizacije, uzrok je viška lučkih kapaciteta i njihove neusklađenosti sa stvarnim prometnim potrebama;
- zastarjelost i nedostatan stupanj specijalizacije lučkih infrastrukturnih i suprastrukturnih kapaciteta, slaba organizacija i neodgovarajuća kvaliteta rada, niska proizvodnost, višak administrativnog osoblja uz istodobni nedostatak suvremenog menadžmenta i uspješnog marketinškog poslovanja te neažurnost i spirost birokratske carine, ključni

Al Basra has an effective capacity of 1.5 million barrels a day, and it can endorse the arrival of a VLCC. In February 2009 Basra terminal initiated a project for increasement of port capacities, by setting four buoys with capacity of 800,000 bbl/d, and it should (if enough funds) certainly be realized by the year of 2013.

Ministry of Oil in Iraq initiated a project of oil storing by building eight oil storage warehouses with a total capacity of 350,000 barrels, on the Faw peninsula in Southern Iraq.

Khor Al Amaya terminal was heavily damaged during the Iran-Iraq War and also during Operation Desert Storm in 1991. In early March 2004, Khor Al Amaya reopened for oil exports, with initial capacity of 12,000 barrels per hour (300,000-400,000 bbl/d). Upon full completion of repairs, Iraq projects Khor Al Amaya's capacity is expected to reach 1.2 million bbl/d.

Iraq holds a considerable portion of the world's oil reserves, but has been unable to increase oil production in recent years due to conflict and geopolitical unrests. It is assumed that there would eventually be a rise in the oil sector in Iraq by 2035. The reason is increasing political and security situation in the country, and the numerous projects that Iraqi oil ministry has contracted with foreign companies. Assumed increase in oil production by 2017 is 2.8 million bbl/d, and 6.1 million bbl/d, by 2035.

Due to the assumed growth in oil production (and the activities undertaken in that direction) and also, given the fact that Iraq (with its 143 billion barrels of proven oil reserves takes the third place in the world), there are basic assumptions for more intensive involvement of Iraq's port system into the global flows of liquid cargo. At the same time, of course, the port system of Iraq must have ability and knowledge to respond to these challenges. In that context, in the next section of this paper are commented some of the most important assumptions for development of Iraqi's port system.

4. EVALUATION OF THE CURRENT STATUS, AND DEVELOPMENT PROJECTION OF IRAQI'S PORT SYSTEM

It is indisputable that in the last 30 years there was a significant decline in port traffic be-

su razlozi zaostajanja i nedovoljnog razvoja iračkog lučkog sustava;

- neprimjerena politika financiranja prometa i politika cijena prijevoznih usluga, pri čemu nije prepoznato značenje potrebe koordiniranja i usklađivanja tarifa na pripadajućem prometnom pravcu, uzrok je zaostajanja u razvitku suvremenih tehnologija transporta.

Postojeće stanje iračkog lučkog sustava ni približno ne udovoljava zahtjevima. Primjerice, vodeća luka Umm Qasr koja je izgrađena 1962. godine nositeljica je 80% iračkog uvoza. Međutim, s obzirom na stagnaciju u razvoju zbog ratnih razaranja i međunarodnih sankcija nije se ulagalo u obnovu i izgradnju novih vezova, infrastrukture i suprastrukture, a nisu se obnavljala niti modernizirala prekrcajna sredstva. Ovo je iznimno važno te je stoga potrebno izgraditi infrastrukturu i obnoviti mehanizaciju i u potpunosti uspostaviti funkciju luke koja će biti integrirana u punom smislu u svjetske pomorske robne tokove.

Off shore naftni terminali Al Basra Oil Terminal i Khor Al Amaya Oil Terminal su glavni terminali za izvoz iračke nafte. Preko njih se izveze oko 1,6 milijuna barela sirove nafte dnevno, odnosno oko 85% izvoza. To je važno spomenuti, jer izvoz nafte sačinjava oko 95% cjelokupnog iračkog budžeta [6].

Nakon osamostaljenja, Irak je imao jako razvijene cestovne i željezničke pravce. Razlog tadašnje razvijenosti željeznice leži u tome da je glavina trgovine bila orijentirana prema Siriji i Turskoj, a samo manjim dijelom prema Arapskom zaljevu. Međutim, luke Basra i Umm Qasr razvijale su se usporedo, pogotovo luka Umm Qasr koja je zbog geografske pozicije izgrađena da bi se rasteretila luka Basra koja najviše zbog dubine mora gubi značaj.

Naftni terminali bili su locirani u Khor Al Amaya i Al Basra. Tijekom Iračko-iranskog rata mnogo je vremena bilo potrebno da se ove luke stave ponovo u funkciju, budući da ih je pored obnavljanja trebalo i očistiti od zaostalih mina i podrtina. U tom razdoblju prekinuti su i svi projekti koji su bili vezani za rijeke Eufrat i Tigris. Ove su rijeke trebale postati glavna poveznica za masivne prijevoze prema i iz unutrašnjosti. Ipak, produbljenje rijeka završeno je u nekim fazama te su korištene kao transportni putovi mauna između Baghdada i Al Amaraha. Ostali projekti poput spajanja rijeke Tigris iz-

cause of a different objective and subjective factors, of which would primarily be to emphasize the following:

- Iraqi seaports, especially Al Maagal, during the thirties missed out a big investment cycle of investments in modern facilities and technologies; while at the same time, in neighboring Arab ports (Kuwait and United Arab Emirates) was investing in upgrading and building new capacities;
- inadequate and outdated railways and some roads are the reason for traffic diversion into the closer (neighboring) or even far away Arabian ports;
- war fares (three wars) on the area of Iraq very much affected on the diversion of a traffic flows in other ports (Kuwait, United Arab Emirates, Jordan, Syria and Turkey);
- lack of permanent maritime and port policy (which encourages the development of one, or two ports) as well as the undefined process of lateralization, is the cause for excess of the port capacities and for their incompatibility with the actual transportation needs;
- obsolence, and inadequate degree of specialization of the port infrastructure and suprastructure, bad organization and inadequate quality of work, low productivity, excess of administrative staff accompanied by a lack of modern management and a successful marketing and marketing operations, along with the slow bureaucratic custom duties are the main reasons for the lack of development of the Iraqi's port system, and for its backwardness.
- inadequate traffic financing policy and transportation services pricing policy, while the meaning of a tariff coordination and harmonization was not recognized on related transportation route, is the reason for backwardness in development of modern transport technologies.

The current state of Iraqi's port system even approximately doesn't meet the requirements. For example, the leading port of Umm Qasr which was built in 1962 carries out 80% of the Iraqi import. However, given the stagnation in the development and due to the war destructions and international sanctions, there were no investments in renovation and construction of a new berths, infrastructure and superstructure, and also, loading facilities have not been renewed or upgraded. This is extremely impor-

među Baghdada i Mosula, kao i Eufrata između Al Hdithaha i Al Qurnaha ostali su samo planovi zbog nedostatka financijskih sredstava.

Nadalje, poznato je da su najveće svjetske luke nastale upravo na ušćima rijeka, što dovoljno govori o tome koliko su značajni prije spomenuti projekti. Povezanost unutrašnjosti i morskih luka rijekama velika je prednost i zbog uštede znatnih financijskih sredstava jer je vodni promet puno jeftiniji od kopnenog. Produbljenje Shat Al Araba je od nemjerljivog značaja za glavne iračke luke. Međutim, zbog nemira koji vladaju u tom području desetljećima, glavnina prometnih tokova je preusmjerena na luke Kuvajta i Irana, a poznato je da kada prometni tokovi jednom promijene pravac vrlo ih je teško vratiti, i zbog toga će Irak imati velikih teškoća u integriranju svojih luka u svjetske prometne tokove.

Luka Umm Qasr predviđena je kao najveća luka te je u planu njezino produbljenje na 12,5 m. Luka će ukupno imati 22 veza te prekrajnu opremu za kontejnere, rasuti teret, Ro-Ro i generalni teret. U planu je izgradnja lučkih skladišta i operativne obale. Uz to, planirana je bolja povezanost željeznicom s unutrašnjošću. Luka Khor Al Zubair, sa svojih 12 vezova planirana je također kao luka za prekraj kontejnera, rasutih tereta te izvoz naftnih derivata, dok je luka Abu Flus s tri veza namijenjena za manipulaciju generalnog tereta. Al Basra i Khor Al Amaya su *off shore* naftni terminali. Al Fao Grand Port planirana je kao jedna od najvećih luka u regiji. Izgradnja će teći prema talijanskom projektu u nekoliko faza. Imat će 11 gatova. Ujedno je planirana kao najveći infrastrukturni projekt/investicija u posljednjih 30 godina u Iraku. Potpuni dovršetak predviđa se za 2030. godinu kada bi luka Al Fao bila među 10 najvećih luka svijeta, s velikim prekrajnim kapacitetima.

S obzirom da je Irak i u povijesti glavninu svoje trgovine obavljao sa Sirijom i Turskom, kao logičan slijed očekuje se potpisivanje ugovora s Turskom za sljedećih 15 godina (izvoz iračke nafte cjevovodima prema turskoj luci Ceyhan, s kapacitetom cjevovoda od preko 1 mil. barela dnevno) te sa Sirijom kao drugom zemljom preko koje će Irak plasirati svoju naftu u Mediteran. Tu je i sporazum o izgradnji plinovoda kojim bi se kroz Tursku irački plin dovođio na Mediteran. Jedan od potpisanih ugovora je i onaj koji se odnosi na proizvodnju 12 mil. barela nafte dnevno sljedećih 7 godina.

tant and therefore it is necessary to build the infrastructure, rebuild the machinery, and fully establish the function of the port which will be completely integrated into the world's maritime trade flows.

Off shore oil terminals Al Basra and Khor Al Amaya are the main export terminals of Iraq. Through them, it is exported around 1.6 million barrels of crude oil per day, or about 85% of exports. It is important to note, because oil exports constitutes about 95% of the total Iraqi budget [6].

After independence, Iraq had a highly developed road and rail routes. Railways were contemporary developed because of the trade oriented towards Syria and Turkey, and only partly towards the Arabian Gulf. However, the port of Basra and Umm Qasr have developed parallel, especially the port of Umm Qasr, which (because of its geographical position) was built to relieve the port of Basra that mostly loses its significance because of the depth of the sea.

Oil terminals were located in Khor Al Amaya and Al Basra. During the Iraq-Iran war, it took a lot of time to put these ports back into operation since besides renewal; they were in need of clearing from mines and wrecks. In that period, all the projects that were connected to the rivers Euphrates and Tigris were terminated. These rivers should become the main connection for the massive transport from and towards inland. However, the deepening of this rivers was completed (in some stages), and they were used as a transportation routes of Maun between Baghdad and Al Amarah. Other projects, such as connecting the river of Tigris between Baghdad and Mosul, as well as connecting the Euphrates between Al Haditha and Al Quran remained only plans due to the lack of funds.

Furthermore, it is known that the largest ports of the world arise right at the river estuaries which speaks volumes about the importantly of aforementioned projects. Connection between the inland and the sea ports is a great advantage because of a substantial financial savings, since the maritime transport is much cheaper than the mainland. The deepening of Shatt Al Arab is of an immeasurable importance for the main ports of Iraq. However, because of the turmoil prevailing in that area for decades, the majority of the traffic flows is diverted to the port Kuwait and Iran, and it is known that once a traffic flow changes direc-

Sigurnosna situacija u Iraku je ipak na većoj razini nego je to bila neposredno nakon okupacije, pa je i investiranje u sektor nafte i plina postalo interesantno velikim svjetskim naftnim kompanijama. Te su kompanije prepoznale iračku naftnu industriju kao pogodnu za ulaganja jer joj je potrebna obnova kako radi šteta nanesenih u godinama rata tako i radi zastarjelosti. Planira se da će velike investicije koje su već započele u Iraku, a pogotovo u naftnom sektoru, pridonijeti da Irak postane jedna od ravnopravnih država na globalnom naftnom tržištu.

U planu je i renoviranje i izgradnja željeznice kako bi se povezali gradovi unutar Iraka, posebice novoizgrađene luke, kao i Irak sa susjednim zemljama. Imajući na umu da je željeznica vrlo bitna kad su u pitanju masivni prijevozi roba i mnogo efikasnija, jeftinija i ekološki prihvatljivija od cestovnog prijevoza, ovaj bi plan trebao biti od velikog značaja za Irak. Za gradnju željezničkog sustava zainteresirane su između ostalih i njemačke kompanije.

Veza prema Siriji i Turskoj već postoji, ali ambicije Iraka su i povezivanje s Europom, što bi bilo od velikog značaja za iračko gospodarstvo. Postoje već potpisani ugovori o spajanju željeznicom zemalja Zaljeva s Europom. To bi značilo izgradnju najduže željezničke pruge na svijetu, pri čemu bi modernizirana željeznica značila puno u smislu ušteda pri transportu tereta iz Arapskog zaljeva prema Mediteranu zbog jeftinijeg i bržeg puta, u odnosu na prijevoz brodovima kroz Sueski kanal.

Dosadašnja i buduća ulaganja u cestovnu mrežu usmjerena su na izgradnju novih cesta koje povezuju južne dijelova s ostalim dijelovima Iraka, prema središtu zapadnog i srednjeg dijela Iraka s tendencijom poboljšavanja sadašnje cestovne mreže te s ciljem izgradnje novih cestovnih mostova i obnove mostova uništenih tijekom bivša tri rata u Iraku.

Obnova, modernizacija i proširenje prekrcajnih kapaciteta u teretnim lukama, izgradnja novih lučkih terminala te modernizacija i izgradnja putničkih terminala, uz poboljšanje organizacije rada, osnova je i glavna pretpostavka budućeg razvitka iračkog lučkog sustava. Govoreći o budućnosti i projekciji razvitka iračkog lučkog sustava u iračkom gospodarstvu, neophodno je mjerama ekonomske politike osigurati ekonomsku stabilnost uz istodobno

tion it is very difficult to revert, and because of that Iraq will have big difficulties in integrating its ports the global traffic flows.

Port of Umm Qasr is foreseen as the largest port with a plan of its deepening to 12.5 m. Port will have 22 connections and reloading equipment for containers, bulk, Ro-Ro, and general cargo. In the plan is construction of port warehouses and operational quay as well as the better rail connections with the interior. Port of Khor Al Zubair with its 12 berths is also planned as a port for transshipment of containers, bulk cargo and for export of oil products, while the port of Abu Flus with three connections is designed for handling a general cargo. Al Basra and Khor Al Amaya are the offshore oil terminals. Al Faw Grand Port is planned to become one of the largest ports in the region. Construction will flow according to the Italian project, in several phases. The port will have 11 piers. It is also planned as the biggest infrastructure project / investment in the last 30 years in Iraq. Full completion is planned for 2030, when the port of Al Faw will be among the 10 largest ports of the world, with major transshipment capacity.

Given the history of Iraq, and the fact that the majority of its trade was performed with Syria and Turkey, as a logical sequence it is expected to sign an agreement with Turkey for next 15 years (the export of Iraqi oil through a pipeline transport towards a Turkish port of Ceyhan, with a capacity of over 1 million barrels per day) and with Syria as well, as the other country through which Iraq will place its oil to the Mediterranean. There is also an agreement to build a pipeline across Turkey to bring Iraq's natural gas to the Mediterranean. One of the signed contracts is also the one that relates to the production of 12 million barrels a day in next 7 years.

However, the security situation in Iraq is on a higher level than it was immediately after the occupation, so the investments in oil and gas sector became interesting to a large international oil companies. These companies have recognized the Iraqi oil industry as suitable for investments, because it needs to recover from the damages inflicted in the war years and also because it is outdated. It is expected that the large investments that are already started in Iraq, especially in the oil sector, will contribute to Iraq in order to become one of equal states in the global oil market.

osiguranje gospodarskog rasta, ubrzanog zapošljavanja te povećanja proizvodnje i izvoza. To istovremeno znači osigurati povećanje efikasnosti cjelokupnog gospodarstva i restrukturiranje neučinkovitih djelatnosti, što čini osnovne pretpostavke oživljavanja nacionalnog gospodarstva.

Budući da je iračko gospodarstvo vrlo ovisno o proizvodnji nafte, nužno je povećati njenu proizvodnju od 2 do 6 milijuna barela nafte dnevno, s obzirom da se proizvodnjom nafte u Iraku ostvaruje preko 90% cjelokupnog bruto nacionalnog dohotka.

Za ostvarenje navedenih projekcija razvoja iračkog lučkog sustava potrebno je ostvariti sve prethodno spomenute tehničko-tehnološke, pravne i ekonomske preduvjete kojima bi se omogućilo jačanje i proširivanje gravitacijskih lučkih područja te integriranje u svjetske tokove tereta.

5. ZAKLJUČAK

Irak predstavlja strateško mjesto posrednika među zemljama svijeta. Kao takav blizu je globalnim tržištima i nalazi se na vrhu Arapskog zaljeva, u jugozapadnom dijelu Azije što ga je odredilo važnom točkom za međunarodnu trgovinu i promet između Bliskog istoka i Europe.

Irak drži znatan dio svjetskih rezervi nafte, ali je bio u nemogućnosti povećati proizvodnju nafte u prijašnjim godinama zbog puno konflikata i geopolitičkih nemira. U novije vrijeme, nakon stišavanja nemira, mnogobrojne ponude i velike razine zainteresiranosti od strane inozemnih kompanija upućuju na realnu mogućnost povećanja proizvodnje nafte. To otvara značajne prilike za intenzivnije uključivanje iračkog lučkog sustava u svjetske pomorske tokove.

Ratnim stradanjima razrušena zemlja, kao što je Irak, najprije treba značajna financijska sredstva za obnovu i modernizacija postrojenja koja bi maksimalizirala efikasnost dopreme sirove nafte do terminala za izvoz i ukrcaja na brodove. Iz svega spomenutog, vidljivo je da su iračke luke u vrlo teškoj poziciji u odnosu na luke okolnih zemalja u regiji. Međutim, ohrabrujuća je činjenica da su velike svjetske kompanije zainteresirane za ulaganja u Irak te da su neke od njih već i počele s ulaganjima u obnovu i razvoj iračkih luka i prometnog sustava u cjelini.

In the plan is also the renovation and the construction of a railway in order to connect cities within Iraq (especially the newly built ports), and also to connect Iraq to its neighboring countries. Bearing in mind that the railway is very important when it comes to a massive transport of goods and it is much more efficient, cheaper, and more environmentally friendly than road transport, this plan should be of a great importance for Iraq. For the construction of the railway system, among others, are interested also a German companies.

The connections to the Syria and Turkey already exist, but the ambition of Iraq is also connecting with Europe, which would be of a great importance for the Iraqi economy. There are already signed a merger agreements about connecting the Gulf countries with Europe by rail. This would mean building the longest railway in the world, where at the modernized railway would mean a lot in terms of a savings in the transport of goods from the Arabian Gulf to the Mediterranean (because of a cheaper and faster routes) in a relation to a shipping across the Suez Canal.

Former and future investments in the road network are focused on building new roads that connect Southern Iraq with others, towards Western and Central Iraq, with a tendency of improving the current road network and the intention to construct of new road bridges and to reconstruct ones destroyed during the past three wars in Iraq.

Renovation, modernization and expansion of transshipment capacities, the construction of a new port facilities as well as the modernization and construction of passenger terminals along with the improvement of work organization, are the main assumptions for future development of Iraq's port system. Speaking about the future and projected development of Iraq's ports in Iraqi economy it is essential to ensure economic stability (while ensuring economic growth), employment, and a rapid increase in production and exports at the same time. It also means ensuring the increase of efficiency of the overall economy and restructurement of inefficient activities, which makes the basic assumptions of the national economy revival.

Since the Iraqi economy is very dependent on oil production, it is necessary to increase its production of 2 to 6 million barrels of oil per

Činjenica da se počelo s ulaganjima te postojanje vrlo ozbiljnih projekata obnove i izgradnje luka sami za sebe govore kolika se važnost pridaje iračkim lukama i na kojim ih se pozicijama u svjetskim pomorskim tokovima očekuje nakon realizacije predviđenih projekata.

day, given that oil production in Iraq generates more than 90% of the gross national income.

For realization of these development projections it is necessary to achieve all the aforementioned technical, legal and economic conditions (which would allow the strengthening and expansion of gravitational areas) and finally, the integration of Iraqi's port system into the global flows of goods.

5. CONCLUSION

Iraq is a strategic intermediary place between the countries of the world. As such, it is close to the global markets and it is located at the top of the Arabian Gulf (in Southwest Asia) what determined it as an important point for international trade and traffic between the Middle East and Europe.

Iraq holds a substantial part of the world's oil reserves, but was unable to increase oil production in previous years because a lot of conflicts and geopolitical unrests. More recently, after termination of unrests, numerous of offers and a great level of interest by foreign companies indicate a real possibility of increasing the production of oil. It opens up significant opportunities for more intensive involvement of Iraq's port system into global maritime flows.

The country as Iraq that suffered of war ruins first of all needs a significant financial resources for reconstruction and modernization of facilities that would maximize the efficiency of crude oil delivery to the export and boarding terminals. From all the aforementioned it is evident that the Iraqi's ports are in extremely difficult position in a relation to the ports of neighboring countries in the region. However, it is encouraging that the large international companies are interested in investing in Iraq, and that some of them have already begun to invest in reconstruction and development of ports, and the transport system overall.

The fact that it has begun to invest, along with the existence of serious reconstruction and construction projects shows how much of importance is given to the ports of Iraq, and on which positions in the global maritime flows they are expected after the implementation of anticipated projects.

LITERATURA / REFERENCES

- [1] Dekanić, I., S. Kolundžić, D. Karasalihović, Stoljeće nafte – veza između nafte, novca i moći koja je promijenila svijet, Zagreb, Naklada Zadro, 2002.
- [2] Dekanić, I., Nafta – blagoslov ili prokletstvo (izvori energije, globalizacija i terorizam), Zagreb, Golden marketing, Tehnička knjiga, 2007.
- [3] Dekanić, I., Energetska budućnost Hrvatske i opskrba plinom, *Energija* 55 (2006), 4, str. 382-415.
- [4] Hess, S., M. Hess, S. Kos, Prilog definiranju upravljanja prometnim sustavima, *Suvremeni promet*, 26 (2006), 1-2, str. 50-54.
- [5] <http://www.portsofiraq.com> (19. 09. 2011.)
- [6] http://edocs.nps.edu/npspubs/scholarly/theses/2008/Jun/08Jun_Munson.pdf(19.09.2011.)
- [7] <http://stat.wto.org> (19. 09. 2011.)
- [8] <http://www.izvorienergije.com> (19. 09. 2011.)
- [9] <http://www.bp.com> (19. 09. 2011.)
- [10] <http://www.sigir.mil/files/assessments/PA-06-080.pdf> (19. 09. 2011.)
- [11] <http://www.tijara-iraq.com> (siječanj, 2010.)
- [12] <http://www.unctad.org> (19. 09. 2011.)
- [13] Jugović, A., S. Hess, T. Poletan Jugović, Traffic demand forecasting for port services, *Promet*, 23 (2011), 1, str. 59-69.
- [14] Klarić, Z., Promjene u važnosti pomorskih djelatnosti u svijetu na kraju drugog milenija, *Pomorstvo*, 15 (2001), str. 177-190.
- [15] Malić, A., I. Rendulić, I., Geoprometna obilježja svijeta, Zagreb, Školska knjiga, 1998.
- [16] Maritime Services in Iraq and Gats Negotiations: Recommendations and Impact, Tijara Provincial and Economic Growth Program, srpanj 2009.
- [17] Poletan Jugović, T., I. Kolanović, L. Šantić, Svjetski pomorski robni tokovi, *Naše more*, 57 (2010), 3-4, str. 103-112.
- [18] Poletan Jugović, T., D. Nahtigal, Integracija Republike Hrvatske u svjetske tokove energenata, *Pomorstvo*, 23 (2010), 2, str. 569-587.
- [19] Poletan, T., Višekriterijska analiza u valoriziranju Paneuropskog koridora V_B, doktorska disertacija, Rijeka, T. Poletan, 2004.
- [20] Poletan, T., Relevantni indikatori prometnog rasta i dinamike robnih tokova na Pan-europskom koridoru V_B, *Pomorstvo*, 18 (2005), str. 137-157.
- [21] Review of Maritime Transport, UNCTAD, 2010.
- [22] Stražičić, N., Pomorska geografija svijeta, Zagreb, Školska knjiga, 1996.
- [23] Stražičić, N., Pravci i dinamika robnih tokova u svijetu, autorizirana predavanja na poslijediplomskom studiju, Rijeka, Sveučilište "Vladimir Bakarić" u Rijeci, 1986.
- [24] The General Company of Iraq Ports