

## The Oil Balance in India and the Implications for the Arab Oil Exporting Countries

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### Abstract

India has become the third largest energy consumer in the world after China and the United States and is expected to increase the relative importance of India in the international oil market in the coming years for two reasons, the first reason is the size of the expected increase in population and the second reason is the expected growth of Indian economy, therefore, oil's contribution to total primary energy consumption has declined in India, but it is still ranks second in the energy mix after coal.

With the expected rise in energy demand in the future and the expected decline in the share of domestic production in meeting the Indian demand for oil inevitably will lead to increased dependence of India on oil imports, especially imports from Arab countries to cover domestic demand. As a result it must be given this promising market more attention, where must be a state of certainty of ensuring global demand for oil in the medium term especially the concept of energy security for India corresponds to the energy security of the Arab oil producing countries.

**KEYWORDS:** Oil – energy – Arab country – India

### Introduction:

India is gaining significant importance in the world energy balance by being one of the main energy consuming countries in the world. As of the end of the first decade of Present century, it replaced Japan as the fourth energy consumer in the world after China, the United States and Russia. In 2015, India replaced Russia to be the third largest energy consumer in the world. Also India has become the third largest oil consumer in the world after the United States and China in 2015. Consequently, India's emergence as a major consuming and importing country in the world oil market is a worthy phenomenon, especially by the Arab countries, which have large oil reserves.

### Purpose of the Study:

The aim of this paper is to look at the current and future balance of Indian oil and to show the distinguished position of the Arab countries in the world oil market at present and in the future and what the major Arab oil producing countries can do to meet India's increasing oil needs.

For this purpose, the paper has been divided into three main parts: In the first part we reviewed the current and future status of the oil sector in India, In order to know the important and continuing role that India will play in relation to the expected increases in world demand for oil, it notes its domestic needs of crude oil in particular is constantly increasing, in return, its oil production is declining, which means more reliance on oil imports to cover those local needs of oil.

The second part discussed the current status of the Arab countries in the international oil market through the review of indicators relating to both proven oil reserves and its share of the quantities produced globally, In addition to the volume of its oil exports and what is the role which can play in the future.

The third and final part was devoted to clarification the implications of the development of the oil balance in India on the Arab countries exporting oil, it is clear India, the world's third-largest energy consumer, will find itself in the shadow of a drop in domestic production and an increase in consumption, suffering from a large deficit in meeting its future oil needs. There is no doubt that this situation of the oil balance in particular will have repercussions on the oil of the main Arab oil producing countries.

### 1. The current and future Status of the Oil Sector in India

It is important to review the current and future status of the oil sector in India in order to know the important and continuous role that India will play in relation to the expected increases in global demand for oil, noting that the local needs of energy in general and oil in particular is increasing and in turn the production of oil taken In decreasing, which means more reliance on oil imports to cover those local needs

#### 1.1. The current Status of the Oil Sector in India

We will study the current state of the oil sector in India through a set of indicators related to the primary energy consumption mix, And the oil balance in India to know the position of India among the world's countries in terms of volume of oil consumption, what is the share of oil in total energy consumption What size gap between oil production and consumption.

##### 1.1.1. The Combination of Demand for Primary Energy

India's primary energy consumption increased by 322 million tons during the period 2006 - 2015 with an annual growth rate of 7.1%, the primary energy consumption in India is 700.5 million tons of oil equivalent in 2015 compared to 378.5 million tons of oil equivalent in 2006 to double its share of global primary energy consumption from 3.4% in 2006 to 5.3% in 2015. See Table no-(1)

Table No-(1)

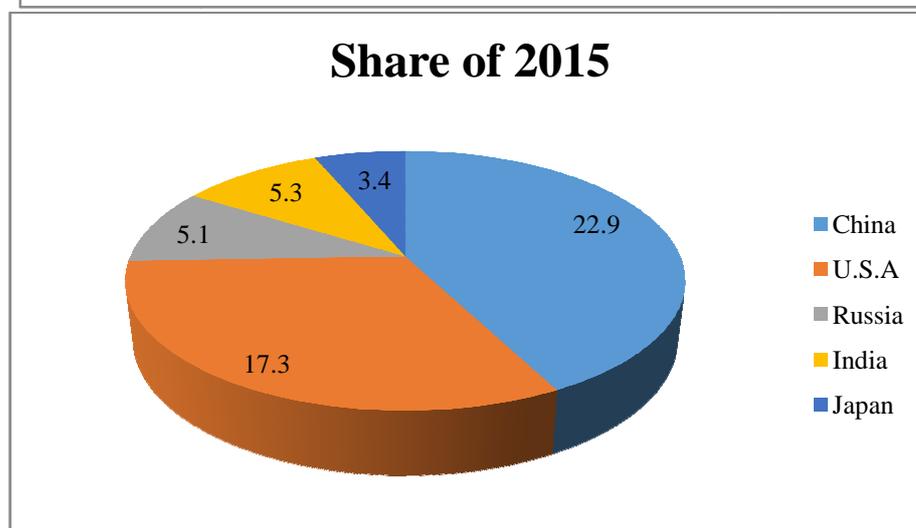
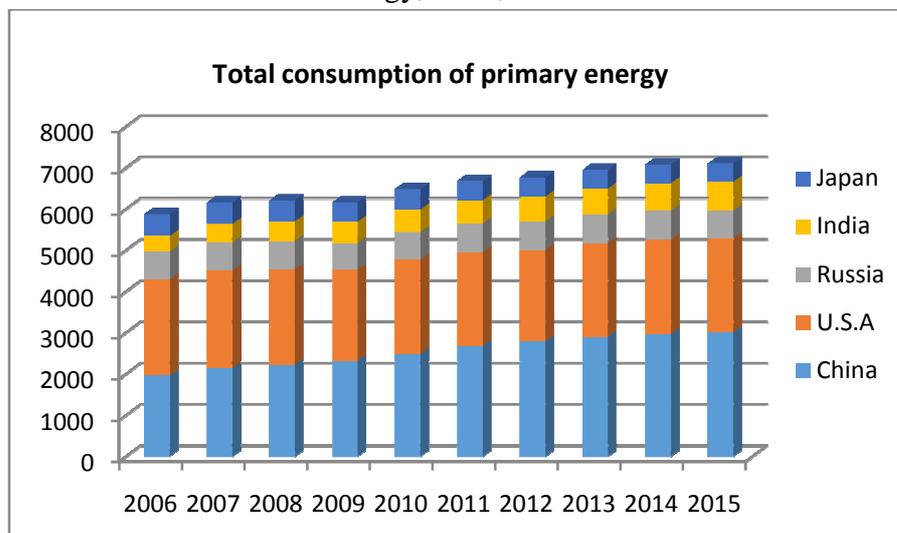
#### Total consumption of primary energy

Figures in Million tons of oil equivalents

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Share of 2015
<b>China</b>	1968.0	2140.1	2222.3	2322.1	2487.4	2687.9	2795.3	2903.9	2970.3	3014.0	22.9
<b>U.S.A</b>	2333.1	2371.8	2320.3	2206.1	2285.3	2266.0	2210.4	2271.7	2300.5	2280.6	17.3
<b>Russia</b>	676.1	680.5	683.5	648.0	673.3	694.9	695.3	688.0	689.8	666.8	5.1
<b>India</b>	378.5	450.2	476.7	515.2	541.0	565.0	599.8	626.0	666.2	700.5	5.3
<b>Japan</b>	521.8	517.4	510.8	469.0	497.4	471.9	468.5	465.8	453.9	448.5	3.4

<b>World</b>	1126	1161	11780	1159	1218	1245	1262	1287	1302	13147	100%
	7.8	7.3	.8	8.5	1.4	0.4	2.1	3.1	0.6	.3	

Source: Bp statistical Review of world Energy, 2008, 2016.



Source: The data at Table no.1

In analyzing the development of the primary energy consumption in India over the period 2006-2015, coal topped the list of the primary energy consumption in 2006 with 51.5% followed by oil with 31.8% (together accounting for 83.3% of total primary energy consumption in India) then natural gas by 8.9%, hydroelectricity 6.7% and finally nuclear power by 1.1% only. Coal consumption over the period 2006-2015 increased by 8.5% to reach its share to 58.1% in 2015. Oil consumption rose at an annual growth rate of 5.5%, although its share fell to 27.9% but still ranks second place after coal. The share of natural gas and hydroelectric power also declined to 6.5%, 4.0% to be ranked in the third and fourth places respectively, then other renewable energy by 2.2% in to be in the fifth place, and finally nuclear power by 1.2% in sixth place. See table no-(2)

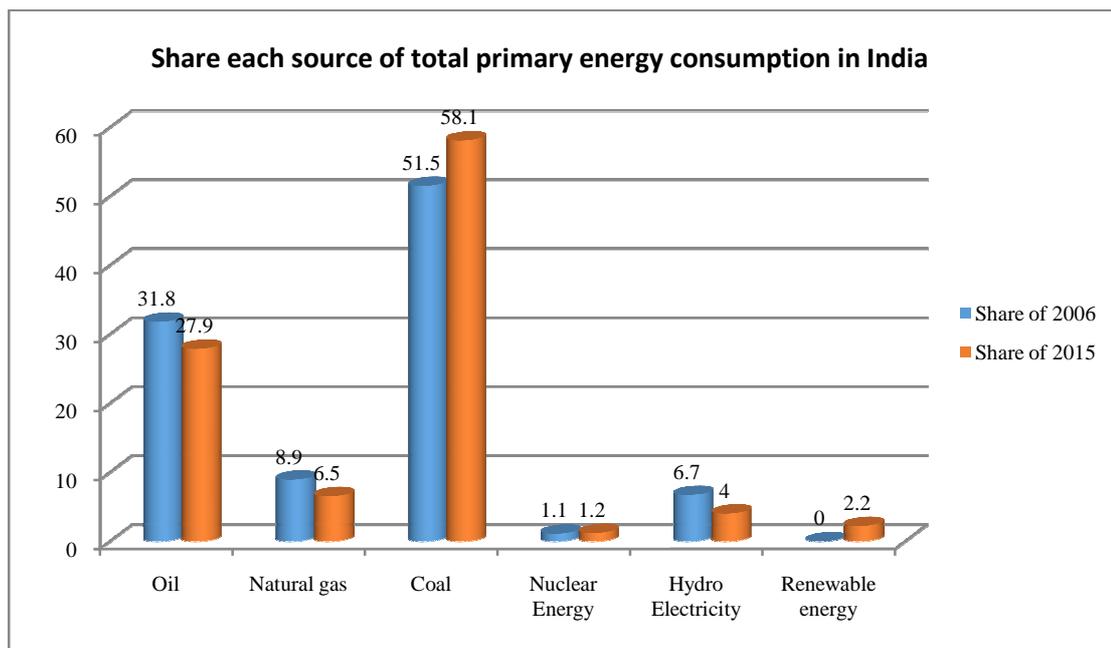
Table No-(2)

**Share each source of total primary energy consumption in India**

Figures in Million tons of oil equivalents/year

	2006	2015	Share of 2006	Share of 2015	growth rate 2006-2015
<b>Oil</b>	120.4	195.5	31.8	27.9	5.5
<b>Natural gas</b>	33.6	45.5	8.9	6.5	3.4
<b>Coal</b>	195.1	407.2	51.5	58.1	8.5
<b>Nuclear Energy</b>	4.0	8.6	1.1	1.2	8.9
<b>Hydro Electricity</b>	25.4	28.1	6.7	4.0	1.1
<b>Renewable energy</b>	-	15.5	-	2.2	-
<b>Total</b>	378.5	700.4	100%	100%	7.1

Source: Bp statistical Review of world Energy, 2008, 2016



Source: The data at Table no.2

**1.1.2 Oil Balance in India**

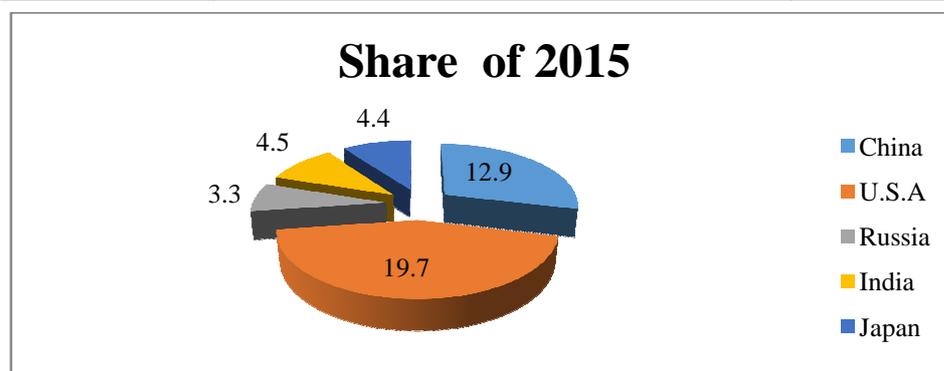
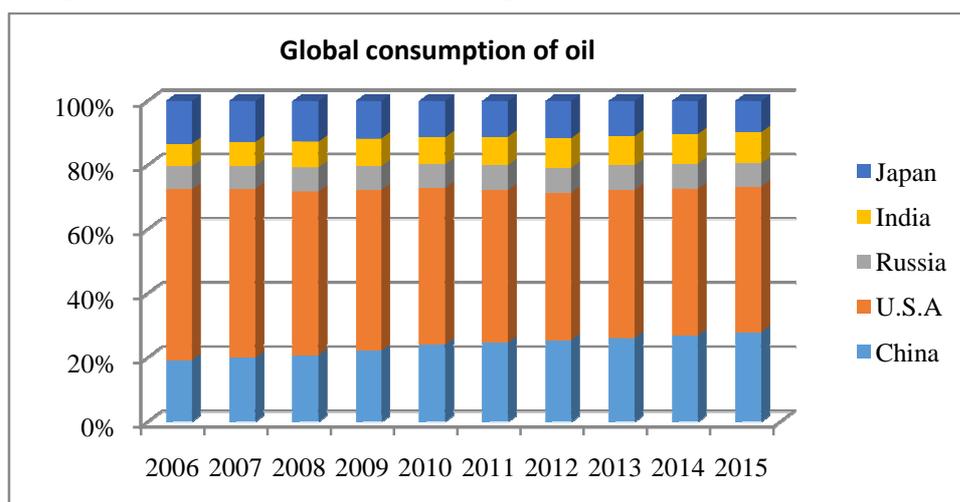
India has become the third largest oil consumer in the world after the United States and China in 2015. India's oil consumption increased by 1.42 million barrels /day over the period 2006-2015 with an annual growth rate of 4.8% reach to 4.16 million barrels /day in 2015 compared to 2.74 million barrels /day in 2006. It represents 5.4% of the total global oil consumption (95.01) million barrels /day in 2015. See Table no-(3)

Table No-(3)  
Global consumption of oil

Figures in Thousand barrel/ day

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Share of 2015
<b>China</b>	7432	7808	7941	8279	9436	9791	10229	10732	11201	11968	12.9
<b>U.S.A</b>	20687	20680	19490	18771	19180	18882	18490	18961	19106	19396	19.7
<b>Russia</b>	2762	2780	2861	2775	2878	3074	3119	3145	3255	3113	3.3
<b>India</b>	2737	2941	3077	3237	3319	3488	3685	3727	3849	4159	4.5
<b>Japan</b>	5174	5014	4848	4389	4442	4441	4688	4531	4309	4150	4.4
<b>World</b>	85728	87087	86578	85700	88765	89790	90663	92049	93109	95008	100%

Source: Bp statistical Review of world Energy, 2016.



Source: The data at Table no.3

It is worth mentioning that India's oil production covered only 27.77 % of the domestic oil consumption in 2006 i.e. (deficit of 1.98 million barrels / day) and then fell to 21.06 % in 2015 i.e. (deficit of 3.28 million barrels / day), due to rising in consumption and declining in production. India's dependence on oil imports to cover

domestic demand has risen from 72.23% in 2006 to 78.94% of the total production in 2015.

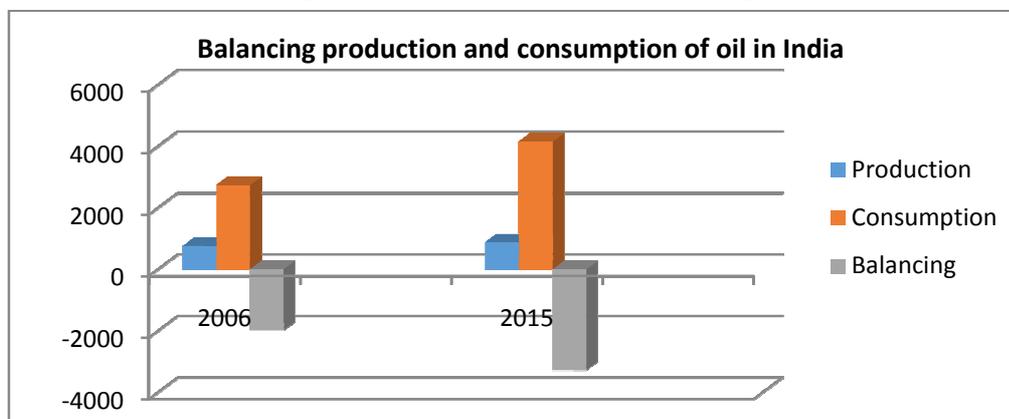
Table (4) shows the dilemma of oil supply in India which is accompanied by an increase in oil production by 1.6% per annum against the high consumption rate of about 4.8%. This means that India is currently imports more than three-quarters of its oil needs.

Table No-(4)

**Balancing production and consumption of oil in India**

	2006	2015	Annual growth rate 2006-2015
<b>Production</b> Figures in Thousand barrels / day	760	876	1.6
<b>Consumption</b> Thousand barrels / day	2737	4159	4.8
<b>Balancing production with consumption</b> Figures in Thousand barrels / day	-1977	-3283	-
<b>Production/ Consumption</b> Figures in Percentage	27.77	21.06	-

Source: Bp statistical Review of world Energy, 2016



Source: The data at Table no.4

India's imports of crude oil actually increased to 3.94 million barrels /day in 2015 compared to 2.21 million barrels/ day in 2006. The annual growth rate was 6.6%, while in terms of oil products it underwent significant changes. India has changed from only an importer of petroleum products to an exporting and importing country. On the import side, India imported about 733 thousand barrels /day of petroleum products in 2006 and the volume of these imports decreased to 637 thousand barrels /day in 2015 by a decrease of 1.5%. See Table no-(5)

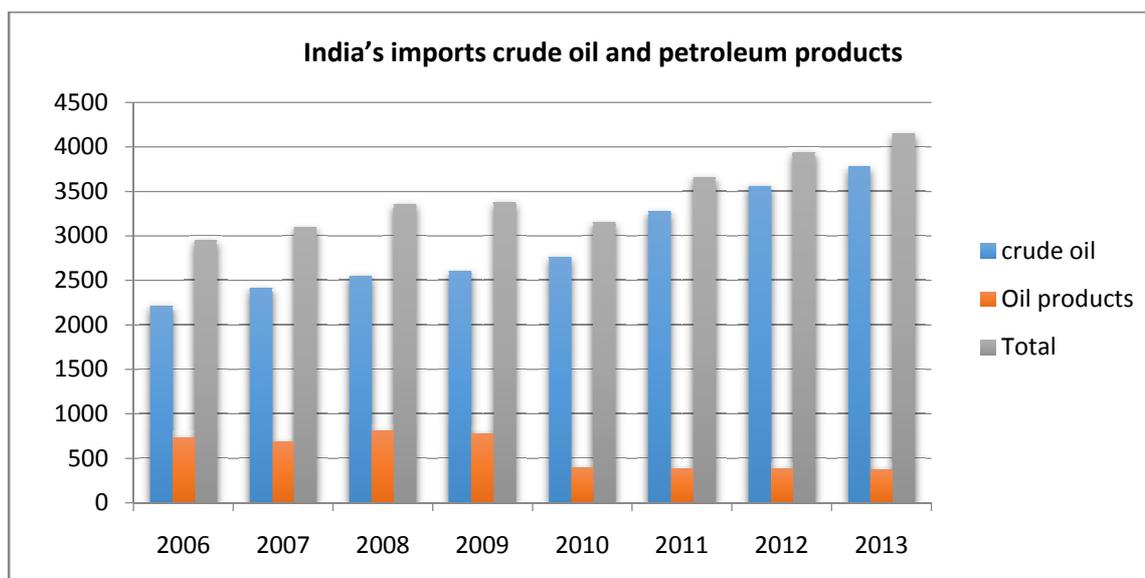
Table No-(5)

**India’s imports crude oil and petroleum products**

Figures in Thousand barrels / day

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Annual growth 2006-2015
<b>crude oil</b>	2214	2412	2553	2598	2759	3275	3560	3774	3791	3936	6.6
<b>Oil products</b>	733	681	804	777	390	379	378	372	488	637	-1.5
<b>Total</b>	2947	3093	3357	3375	3149	3654	3938	4147	4279	4572	5.0

Source: Organization of the Petroleum Exporting Countries, OPEC, Annual Statistical Bulletin, 2010, 2015, 2017



Source: The data at Table no.5

The total India's imports of crude oil from different countries in the world, including Arab countries, rose from 1.6 million barrels /day over the fiscal year 2001/2002 to 3.4 million barrels /day over the fiscal year 2011/2012. Thus, the growth rate of these imports amounted to 8.1% annually over the period (2001/2002)-(2011/2012).See table no-(6)

India's imports of crude oil from the Arab countries members of the Organization of the Petroleum Exporting Countries (OAPEC) have increased at an annual growth rate of 8.5 %. The imports rose from 898 thousand barrels /day to more than two million barrels /day, the share of the Arab member countries in India's total crude oil imports over the same period rose from 56.8% to 59.2%.

There are four major Arab countries that have the largest share of India's crude oil imports. These countries are Saudi Arabia, Iraq, Kuwait and the UAE. India's imports from these four countries account for more than half (52.5%) of total imports over the fiscal year 2011/2012. Saudi Arabia is the main partner of India in terms of its imports of crude oil, as these imports constitute 18.9% of the total imports of India. India's imports from Saudi Arabia increased by 8.3% annually, it rose from 292 thousand barrels /day in the fiscal year 2001/2002 to 651 thousand barrels /day in the financial year 2011/2012. Iraq is also the second partner with the volume of imports by India doubled more than six times. The imports from Iraq rose from 76 thousand barrels /day to 483 thousand barrels /day constituting 14% of India's total crude oil imports. Kuwait is in the third place. The imports increased by 3% per year. It rose from 264 thousand barrels /day to 355 thousand barrels /day, accounting for 10.3% of the total imports of India. The UAE comes after Kuwait with 316 thousand barrels /day accounting for 9.2% of the total imports of India. India also imports small quantities of crude oil from Qatar (130) thousand barrels /day, Egypt (57) thousand barrels /day, Algeria (42) thousand barrels /day and Libya (3) thousand barrels /day over the fiscal year 2011/2012.

India also imports small quantities of crude oil from other Arab countries such as Oman, Yemen and Sudan, but India's imports from these three countries declined from 108 thousand barrels /day in 2001/2002 that is equivalent to 6.8%, to 92 thousand barrels /day in 2011/2012 that is equivalent to 2.7% of the total imports of India. Thus, India's imports of crude oil from the Arab countries in general amounted to 2.1 million barrels /day in the fiscal year 2011/2012 accounting for 61.9% of India's total crude oil imports in the same year.

Table No-(6)

#### India's total crude oil imports

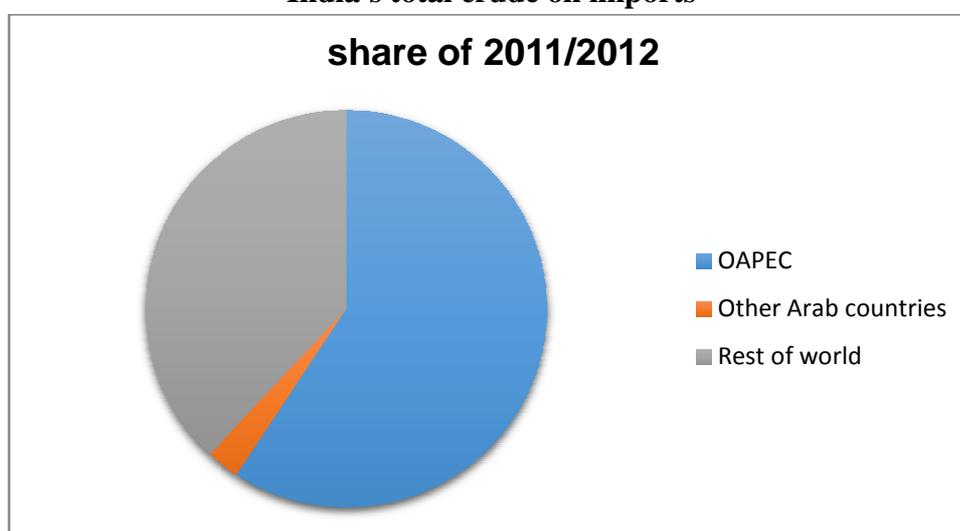
Figures in Thousand barrels / day

	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
<b>S. Arabia</b>	292	405	505	483	351	512	567	524	577	572	651
<b>Iraq</b>	76	84	78	176	225	270	286	289	300	345	483
<b>Kuwait</b>	264	211	250	229	233	245	232	298	267	254	355
<b>U.A.E</b>	153	181	169	129	161	176	218	278	233	295	316
<b>Qatar</b>	11	4	14	24	9	35	50	59	109	113	130
<b>Egypt</b>	80	62	72	43	39	39	38	45	61	37	57
<b>Algeria</b>	0	0	0	0	5	13	6	5	42	56	42
<b>Libya</b>	22	22	34	29	18	3	41	18	19	22	3
<b>Syria</b>	0	0	0	0	0	0	0	2	5	0	0
<b>OAPEC</b>	898	969	1122	1113	1041	1293	1438	1518	1613	1694	2037
<b>Oman</b>	18	8	5	3	7	0	10	6	108	109	52
<b>Yemen</b>	90	64	39	70	71	91	44	13	59	60	26
<b>Sudan</b>	0	0	16	7	5	3	19	16	22	24	14
<b>Other</b>	108	72	60	80	83	94	73	35	189	193	92

<b>Arab countries</b>											
<b>Total Arab countries</b>	1006	1041	1182	1193	1124	1387	1511	1553	1802	1887	2129
<b>Rest of world</b>	575	606	629	732	872	852	926	1113	1396	1398	1310
<b>Total World</b>	1581	1647	1811	1925	1996	2239	2437	2666	3198	3285	3439

Source: Muzaffar, Hikmat al-Barazi. The Energy Balance in India and the Implications for the Member States. Organization of Arab Petroleum Exporting Countries, Journal of Oil and Arab Cooperation, No.154, 2015

**India's total crude oil imports**



Source: The data at Table no.6

**1.2 The Future Status of the Oil Sector in India Until 2040**

After reviewing the primary energy consumption mix in India during the period 2006-2015, this paper will address the future estimates of India's oil consumption and supply up to 2040 according to the latest report by the US Energy Information Administration (EIA) and the OPEC to compare the results of those forecasts with focus on the expectations included in the report of the world oil outlook issued by the OPEC in 2016.

**1.2.1 The Combination of Demand for Primary Energy Until 2040**

India's relative importance in energy consumption is expected to increase in the coming years due to two main reasons: the expected increase in population and the expected growth of the Indian economy. Data from the 2017 US EIA and the 2016 OPEC indicate that India will witness population growth at an annual rate. According to OPEC, the growth will be 0.89% and according to the US EIA, the growth will be 0.91%. Over the period 2015-2040, According to EIA, India is also expected to record the highest annual growth rate in the world gross domestic product including China. It is expected to reach between 5.01% according to the US EIA and 6.9% according to OPEC over the same period.

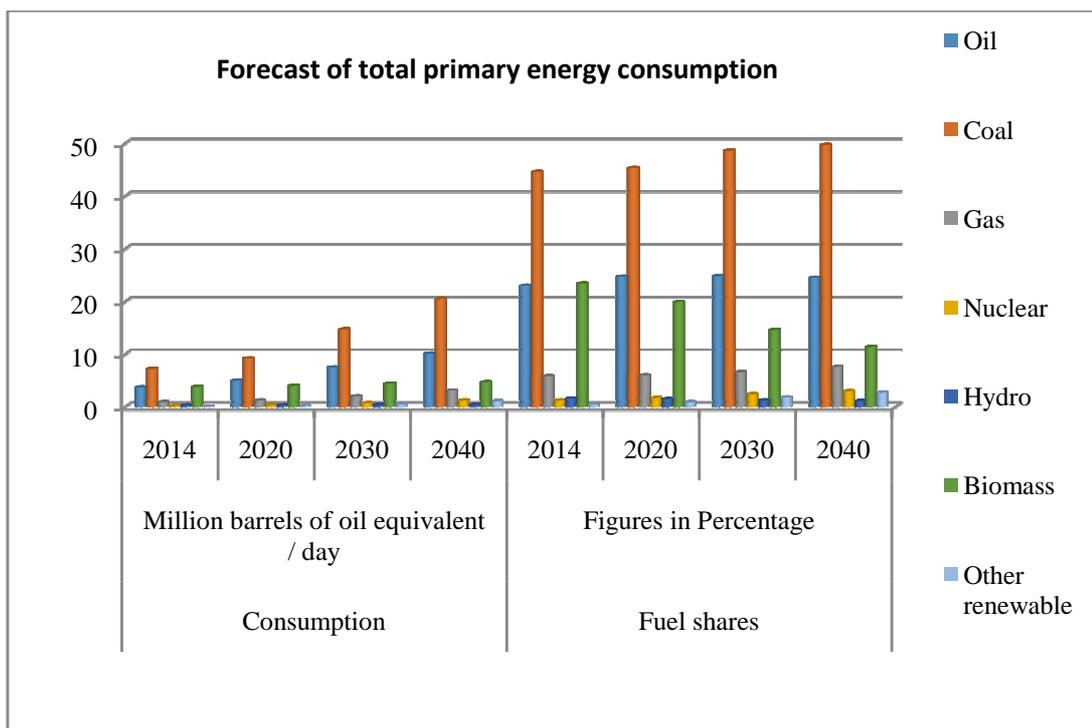
According to OPEC's baseline scenario, India's primary energy consumption is expected to rise by 25.2 million barrels /day over the period 2014-2040 with an annual growth rate of 3.7 % to reach 41.2 million barrels /day in 2040 compared to 16.0 million barrels /day in 2014. Looking at the of primary energy consumption in India, the share of oil will rise slightly from 23% of total primary energy consumption in 2014 to 24.5% in 2040 to maintain his site in the second place after coal, that will increase its share from 44.6% to 49.7% of the total primary energy consumption in India over the same period. The share of Biomass energy is expected to decline from 23.4% in 2014 to 11.4% in 2040 to come in third place. While the share of natural gas is expected to increase from 5.8% in 2014 to 7.6% in 2040 to come in fourth place, Nuclear power also expected to rose from 1.2% in 2014 to 3.0% in 2040 to come in fifth place. As well as the share of other renewable resources expected to increase from 0.5% in 2014 to 2.7% in 2040 to come in sixth place. The share of hydroelectric power will fall from 1.6% in 2014 to 1.1% in 2040 to come in seventh place. See Table no-(7)

Table No-(7)

**Forecast of total primary energy consumption**

	Consumption Million barrels of oil equivalent / day				Fuel shares Figures in Percentage				Annual growth rate 2014-2040
	2014	2020	2030	2040	2014	2020	2030	2040	
<b>Oil</b>	3.7	5.0	7.5	10.1	23.0	24.7	24.8	24.5	4.0
<b>Coal</b>	7.2	9.2	14.7	20.5	44.6	45.3	48.6	49.7	4.1
<b>Gas</b>	0.9	1.2	2.0	3.1	5.8	6.0	6.6	7.6	4.8
<b>Nuclear</b>	0.2	0.4	0.7	1.2	1.2	1.7	2.4	3.0	7.4
<b>Hydro</b>	0.3	0.3	0.4	0.4	1.6	1.5	1.2	1.1	2.2
<b>Biomass</b>	3.8	4.0	4.4	4.7	23.4	19.9	14.6	11.4	0.9
<b>Other renewable</b>	0.1	0.2	0.5	1.1	0.5	0.9	1.8	2.7	10.5
<b>Total</b>	16.0	20.3	30.2	41.2	100.0	100.0	100.0	100.0	3.7

Source: Organization of the Petroleum Exporting Countries (OPEC) , World Oil Outlook 2016.



Source: The data at Table no.7

### 1.2.2 Oil Balance in India Up To 2040

According to OPEC estimates, the demand for oil in India is expected to increase by 6.3 million barrels /day over the period 2015-2040, with an increase rate of 3.79% per year to reach 10.4 million barrels /day in 2040 compared to 4.1 million barrels /day in 2015. See Table no-(8)

Table No-(8)

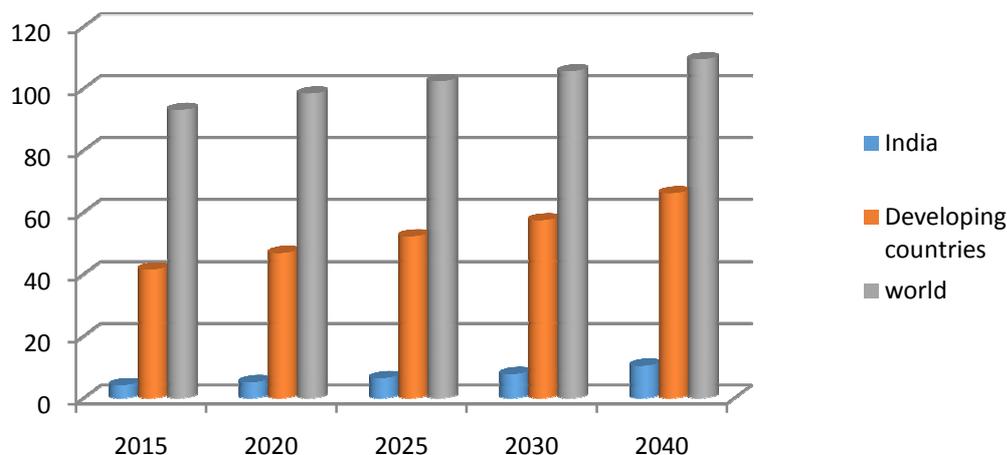
#### Oil Demand forecast in India up to 2040

Figures in Million barrels / day

	2015	2020	2025	2030	2035	2040	Annual rate 2015-2040
<b>India</b>	4.1	5.1	6.4	7.7	9.0	10.4	3.79
<b>Developing countries</b>	41.5	46.8	52.2	57.4	62.0	66.1	1.88
<b>world</b>	93.0	98.3	102.3	105.5	107.8	109.4	0.65

Source: Organization of the Petroleum Exporting Countries (OPEC), World Oil Outlook 2016

### Oil Demand forecast in India up to 2040



**Source:** The data at Table no.8

The expectations of the US EIA are not much different according to India's demand for oil, which is expected to rise by 4.3 million barrels /day over the same period with a growth rate of 2.96 % annually to reach 8.3 million barrels /day in 2040 compared to 4.0 million barrels/ day in 2015. See Table no-(9)

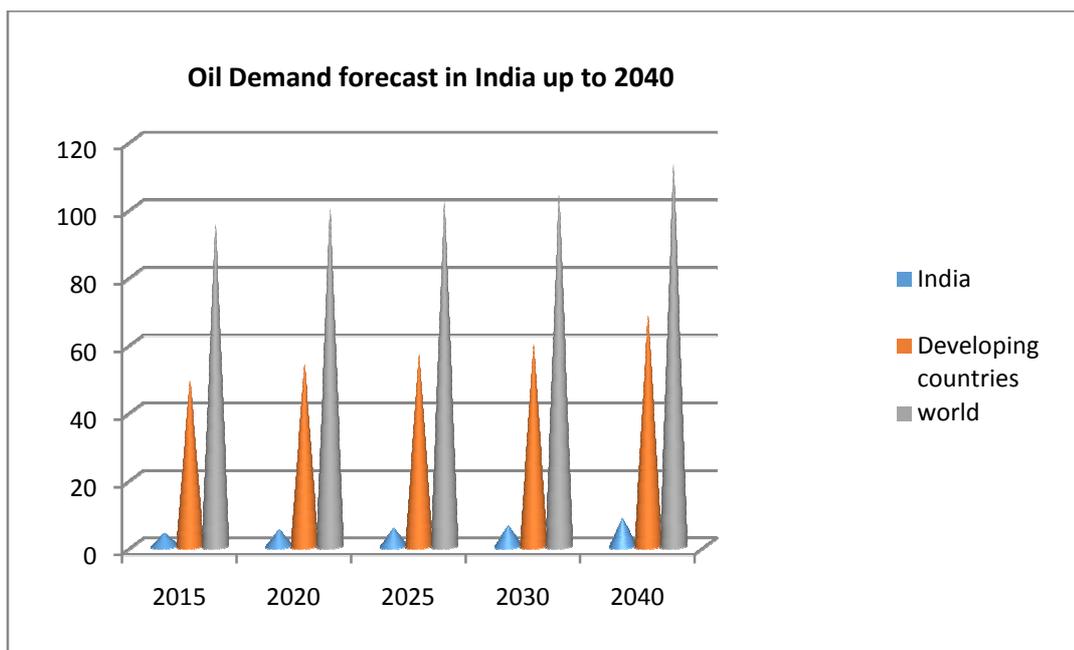
Table No-(9)

### Oil Demand forecast in India up to 2040

Figures in Million barrels / day

	2015	2020	2025	2030	2035	2040	Annual growth 2015-2040
<b>India</b>	4.0	5.0	5.4	6.1	7.1	8.3	2.96
<b>Developing countries</b>	49.2	53.9	56.9	59.8	63.8	68.3	1.32
<b>world</b>	95.3	99.9	102.0	104.1	108.0	112.9	0.68

Source: Energy Information Administration EIA, International Energy Outlook 2017



Source: The data at Table no.9

### 1.2.3 Forecasts for Oil Demand in India Up To 2040

The demand for oil in India is expected to accounting between 7.35% and 9.51% of the total world oil demand in 2040 (7.35% of the expectations of the EIA, 9.51% of OPEC's expectations) compared to 4.20% - 4.41% in 2015 (4.20% for the EIA, 4.41% for the OPEC). The demand for oil in India is expected to accounting between 12.15% and 15.73% of total oil demand in developing countries in 2040 (12.15% for the EIA, 15.73% for the OPEC) compared to 8.13% - 9.88% in 2015 (8.13% for the EIA, 9.88% for the OPEC).

As for the distribution of demand for oil with regard to economic sectors, the transport sector is expected to witness an annual growth rate of 5.07% over the period 2015-2040 raising the demand for oil in this sector from 1.8 million barrels /day in 2015 to 6.2 million barrels/day, and it will constitute 57.14% of the total Demand for oil in India. Followed by the industrial sector at an annual growth rate of 3.0% to increase the demand of this sector from 1.1 million barrels /day in 2015 to 2.3 million barrels /day in 2040 to constitute 21.90% of the total demand. Other sectors (domestic, commercial and agricultural) grew by 0.7%, increasing demand from 0.9 million barrels /day in 2015 to 1.7 million barrels /day in 2040, this accounting for 16.19% of the total demand. Finally, the electricity generation sector will Witness an annual growth rate of 0.1%, bringing the demand in this sector from 0.2 million barrels /day in 2015 to 0.3 million barrels /day in 2040 to accounting for 2.86% of the total demand for oil in India.

Table No-(10)

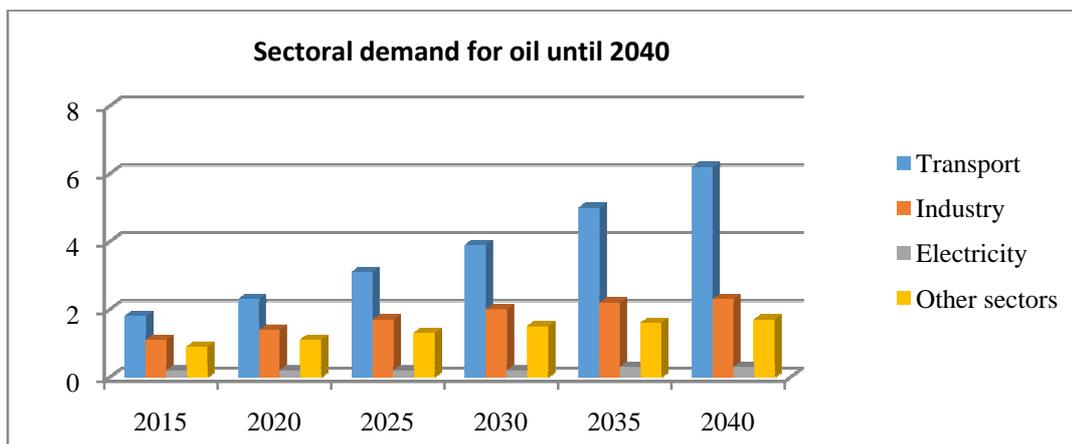
#### Sectoral demand for oil until 2040

Figures in Million barrels / day

	2015	2020	2025	2030	2035	2040	Annual growth 2015-2040
<b>Transport</b>	1.8	2.3	3.1	3.9	5.0	6.2	5.07

<b>Industry</b>	1.1	1.4	1.7	2.0	2.2	2.3	3.0
<b>Electricity</b>	0.2	0.2	0.2	0.2	0.3	0.3	0.1
<b>Other sectors</b>	0.9	1.1	1.3	1.5	1.6	1.7	0.7
<b>Total</b>	4.0	5.0	6.3	7.6	9.1	10.5	

Source: Organization of the Petroleum Exporting Countries (OPEC) , World Oil Outlook 2016



Source: The data at Table no.10

### 1.2.4 Forecasts of Oil Production in India Up To 2040

According to forecasts of the OPEC, Crude oil and natural gas liquids production in India is expected to decline by 0.3 million barrels /day over the period 2015-2040, a drop of (-1.6%) per year to reach 0.6 million barrels /day in 2040, compared to 0.9 million barrels/day in 2015. See Table no-(11)

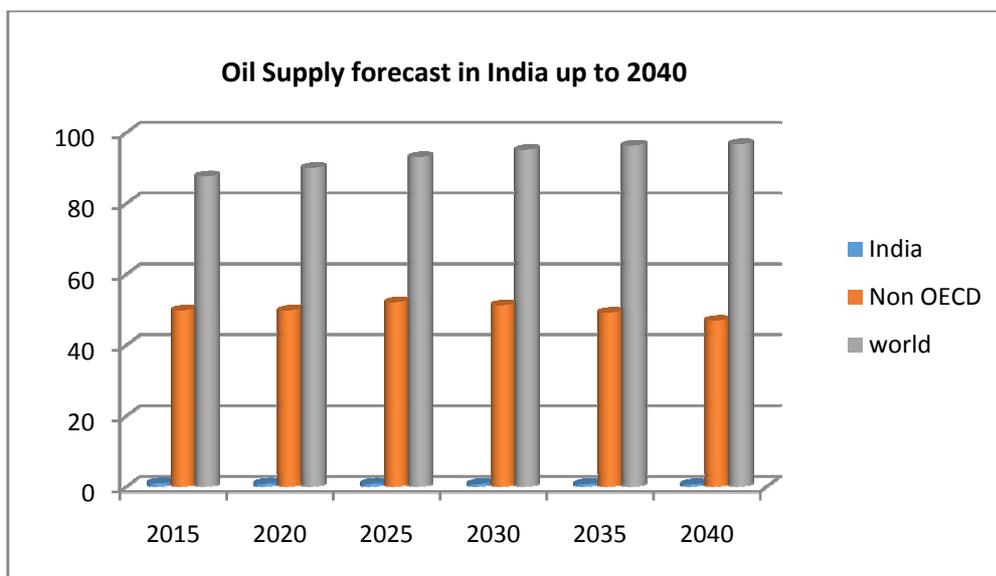
Table No-(11)

### Oil Supply forecast in India up to 2040

Figures in Million barrels / day

	2015	2020	2025	2030	2035	2040	Annual growth 2015-2040
<b>India</b>	0.9	0.8	0.8	0.7	0.7	0.6	-1.6
<b>Non OECD</b>	49.7	49.7	52.0	51.2	49.1	46.8	-0.2
<b>world</b>	87.6	90.0	93.0	95.1	96.3	96.7	0.4

Source: Organization of the Petroleum Exporting Countries (OPEC) , World Oil Outlook 2016



Source: The data at Table no.11

According to forecasts of the US EIA on India's oil and other liquids production, it is expected to rise by 0.1 million barrels /day over the same period with a growth rate of 0.4% per year to reach 1.1 million barrels /day in 2040 compared to 1.0 million barrels/day in 2015. See Table no-(12)

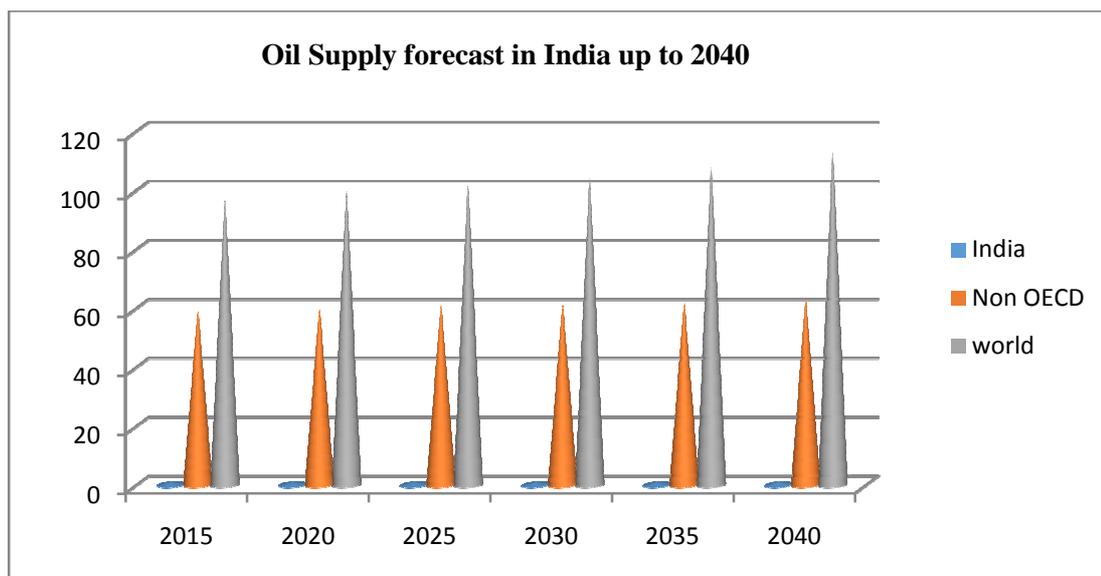
Table No-(12)

**Oil Supply forecast in India up to 2040**

Figures in Million barrels / day

	2015	2020	2025	2030	2035	2040	Annual growth 2015-2040
<b>India</b>	1.0	1.0	1.0	1.0	1.0	1.1	0.4
<b>Non OECD</b>	58.9	59.6	60.8	61.1	61.7	63.2	0.3
<b>world</b>	96.7	99.8	101.8	103.9	107.8	112.8	0.6

Source: Energy Information Administration EIA, International Energy Outlook 2017



Source: The data at Table no.12

Oil and natural gas liquids production in India is expected to accounting between 0.62% and 0.98% of the total oil and natural gas liquids production in the world in 2040 (0.98% for the EIA, 0.62% for the OPEC) compared to (1.03% for both the EIA, and the OPEC). Oil and natural gas liquids production in India is expected to accounting between 1.74% and 1.28% of total oil and natural gas liquids production in the developing countries in 2040 (1.74% for EIA, 1.28% for OPEC) compared to 1.70% -1.81% in 2015 (1.70% for the EIA, 1.81% for the OPEC).

When the balancing of Indian production of crude oil and natural gas liquids with demand of it over the period 2015-2040, it can be seen clearly that the deficit that India will face over this period which will increase from year to year to reach 9.8 million barrels /day in 2040 compared to 3.2 million barrels/day In 2015 (Based on OPEC's baseline scenario). Based on these developments, the share of domestic production in meeting the Indian demand for oil will fall from 22.0% in 2015 to only 5.8% in 2040 that means that India's dependence on oil imports to cover domestic demand for oil will rise from 78.0% in 2015 to 94.2% in the 2040. See Table no-(13)

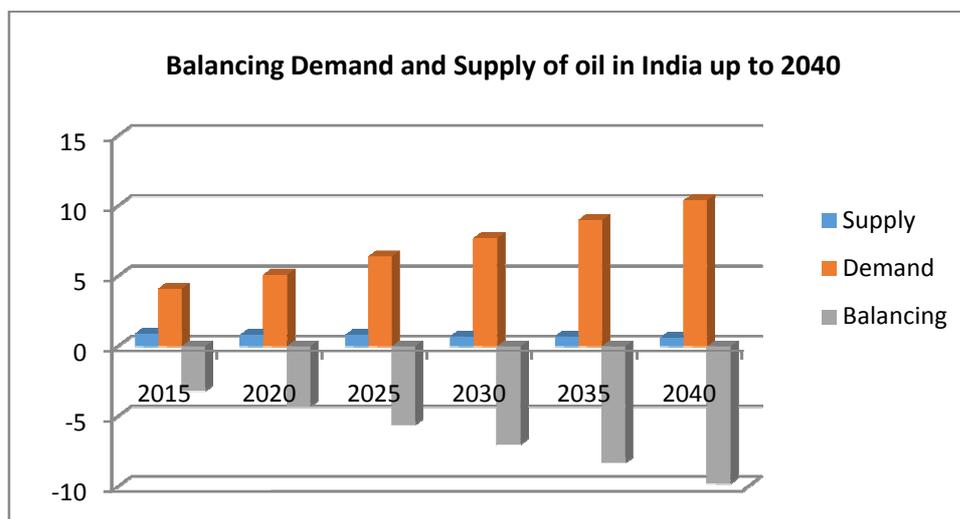
Table No-(13)

**Balancing Demand and Supply of oil in India up to 2040**

	2015	2020	2025	2030	2035	2040	Annual growth 2015-2040
Supply Figures in Million barrels / day	0.9	0.8	0.8	0.7	0.7	0.6	-1.6
Demand Figures in Million barrels / day	4.1	5.1	6.4	7.7	9.0	10.4	3.79
Balancing Supply with Demand Figures in Million	-3.2	-4.3	-5.6	-7.0	-8.3	-9.8	-

barrels / day							
Supply / demand Figures in Percentage	22.0	15.7	12.5	9.1	7.8	5.8	-

Source: Table No (8), Table No (11)



Source: The data at Table no.13

## 2. The Current place of the Arab Countries in the global Oil Market

The Arab countries have a distinct position in the global Oil Market. This position is reinforced by the acquisition of the bulk of the world's proven reserves of oil as well as acquisition the bulk of the world's oil production and exports.

### 2.1 Global Oil Reserves

The efforts made by the countries of the world and the huge amounts of money invested in the sector of oil and policies followed over the past decade had a great effect on the increase of the volume of oil reserves. The global reserve of crude oil increased during period 2006-2015 reach to 1.28 trillion barrels in 2015 compared to 1.15 trillion barrels in 2006 with annual growth rate of 1.22%. See Table no-(14)

The Arab oil reserves have also witnessed a development in the last decade but at a lower rate. It increased to 706.45 billion barrels in 2015 compared with 679.34 billion barrels in 2006 with annual growth rate of 0.44% during the period 2006-2015 that is lower than the growth rate of global reserves over the same period which is 1.22%. This led to a decline in its share of total global reserves to reach 54.99% in 2015 compared to 58.99% in 2006.

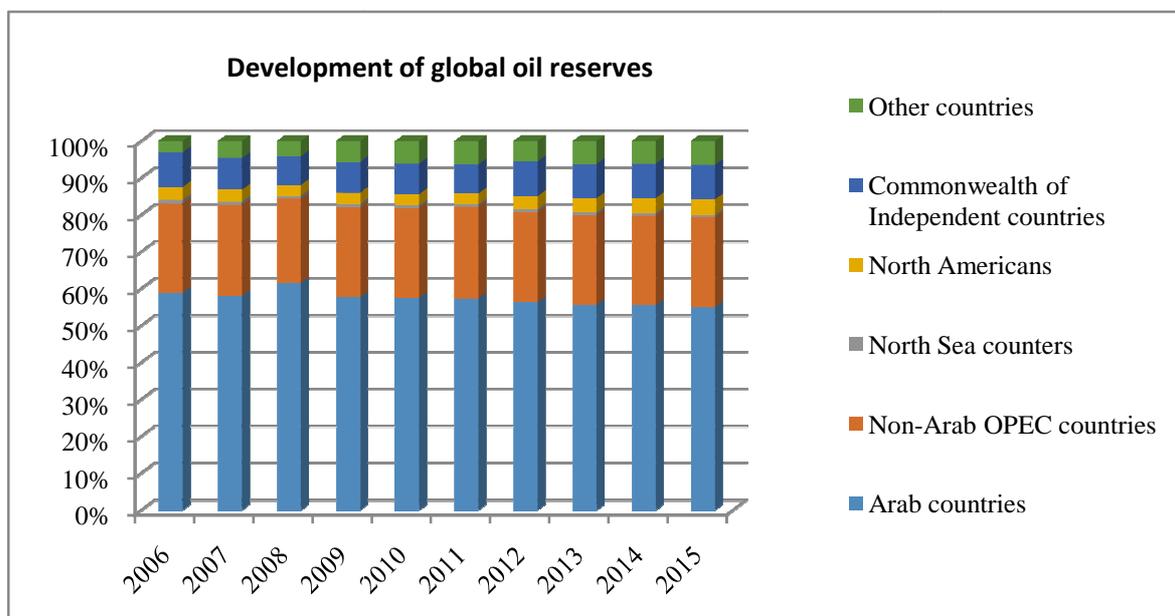
Comparing the share of Arab countries of the total world oil reserves by the end of 2015 with other international groups, it ranks first place among the regions of the world followed by the non- Arab OPEC countries by 24.38%, the Common wealth countries (Independent States) with 9.32%, North America (4.22%), and North Sea countries with (0.61%).

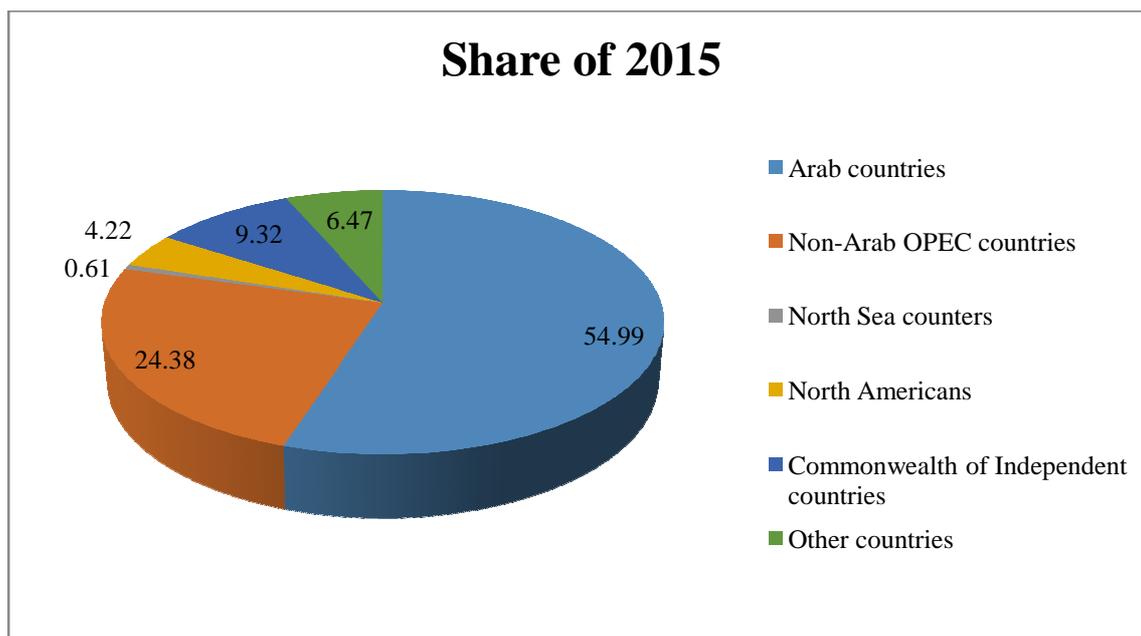
Table No-(14)  
**Development of global oil reserves**

Figures in Billion barrels at end of year

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Share of 2015
<b>Arab countries</b>	679.34	679.77	780.73	683.60	683.66	712.08	713.35	713.20	711.93	706.45	54.99
<b>Non-Arab OPEC countries</b>	277.43	288.60	290.23	290.23	289.62	308.47	311.13	311.59	311.26	313.26	24.38
<b>North Sea countries</b>	11.72	10.47	10.09	9.76	8.53	8.15	8.47	8.81	8.48	7.89	0.61
<b>North Americans</b>	40.12	38.01	36.76	35.62	35.62	36.44	45.21	49.47	52.31	54.17	4.22
<b>Commonwealth of Independent countries</b>	107.99	100.68	98.80	98.90	98.90	98.90	119.06	118.89	119.79	119.79	9.32
<b>Other countries</b>	34.96	53.31	52.47	66.98	72.40	77.51	69.57	79.84	78.51	83.11	6.47
<b>Total World</b>	1151.6	1170.8	1169.1	1185.1	1188.7	1241.6	1266.8	1281.8	1282.3	1284.7	100%

Source: Organization of Arab Petroleum Exporting Countries, Report of the Secretary General, 2011, 2015, 2016





**Source:** The data at Table no.14

## 2.2 Global Oil Production

Oil production is influenced by the prevailing political conditions in the production areas, OPEC policies and other producing countries and their production plans and impact of the market because supply is a response to demand. The global crude oil production has witnessed an observable variation in its levels over the past decade. The production rose from 80.65 million barrel /day in 2006 to 85.61 million barrels /day in 2007 which is the highest level over the period 2006-2015, and then it dropped to 70.91 million barrels in 2009 that is the lowest level over the same period. Then it rose again in 2010 to 72.11 million barrels/day, then the production resumed rise in the following years to reach 78.01 million barrels/day in 2015. Thus,

The final result is a decline in total global crude oil supply over the period 2006-2015 by 2.64 million barrels /day with a decrease rate of (-0.37%) per year. See Table (15).

Arab oil production amounted to 22.97 million barrels /day in 2006 and then it fell to 21.12 million barrels/day in 2009 which is the lowest level over the period of the study. This is because of the decision taken by the OPEC countries in December 2008 to reduce production by 4.2 million barrels as of the beginning of 2009 which is the largest reduction in production of the OPEC member states since the beginning of production by quotas in the Organization. (Majid, 2016) Then, the production resumed rise in the following years to reach 23.8 million barrels / day in 2012 which is the highest level over the same period. Then, it fell in 2013 and 2014 to reach 23.25 and 22.83 million barrels /day respectively. And then it returned to rise again in 2015 to reach 23.68 million barrels /day.

The final result is the increase in the production of crude oil by the Arab countries over the period 2006-2015 by about 707.5 thousand barrels / day with an annual growth rate of 0.34%. This led to increase their share of the total global production from 28.48% in 2006 to 30.36% in 2015.

Comparing the share of the Arab countries in the total world oil production by the end of 2015 with other global groups, the Arab countries come in the first place

among the regions of the world followed by North America with 18.56%, the Common wealth countries (Independent States) by 17.14%, the Non-Arab OPEC countries by 12.55%, the North Sea countries in last place with 3.12% of the total production.

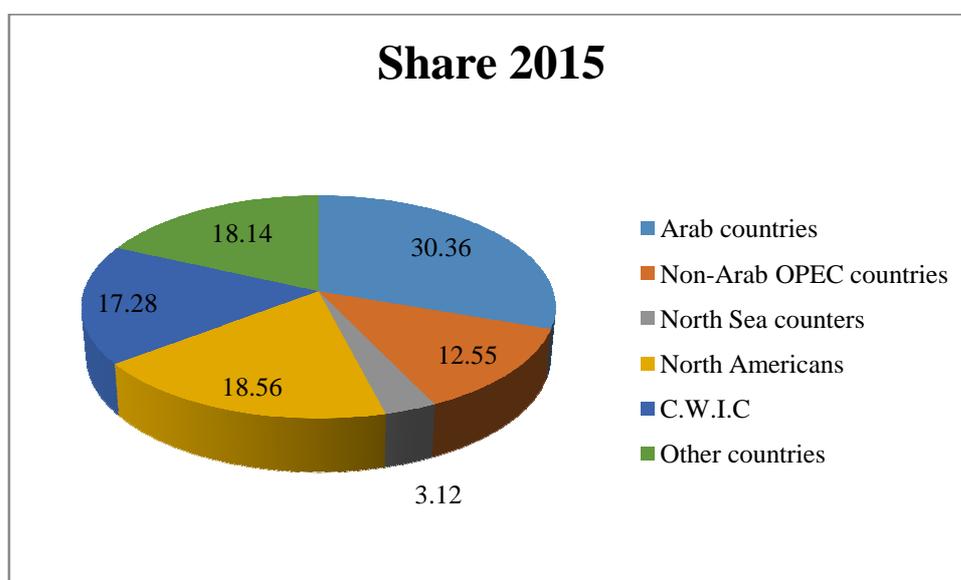
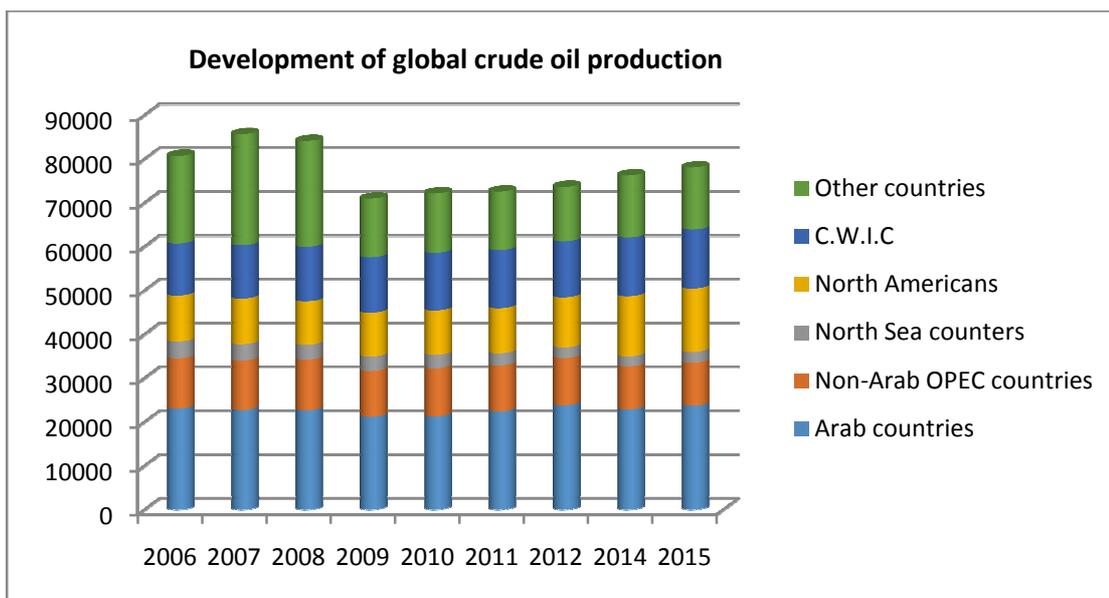
Table No-(15)

**Development of global crude oil production**

Figures in Thousand barrels / day

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Share 2015
<b>Arab countries</b>	22972.6	22674.9	22588.9	21121.4	21216.9	22351.4	23802.8	23246.8	22832.8	23680.1	30.36
<b>Non-Arab OPEC countries</b>	11488.8	11307.3	11589.3	10480.8	10973.8	10550.0	10705.4	10344.6	9820.0	9792.0	12.55
<b>North Sea countries</b>	3839.9	3702.0	3363.6	3309.7	3071.2	2733.0	2473.5	2315.0	2292.0	2437.1	3.12
<b>North Americans</b>	10469.1	10416.3	9911.9	9963.7	10097.1	10286.6	11397.6	12485.2	13679.4	14471.3	18.56
<b>C.W.I.C</b>	11925.2	12192.3	12429.5	12661.0	13220.5	13264.5	12792.0	13315.0	13400.0	13477.0	17.28
<b>Other countries</b>	19955.7	25313.5	24166.0	13372.0	13530.1	13321.1	12402.4	13233.0	14166.8	14148.5	18.14
<b>Total World</b>	80651.3	85606.3	84049.2	70908.6	72109.6	72506.6	73573.7	74939.6	76191.0	78006.0	100%

Source: Organization of Arab Petroleum Exporting Countries, Report of the Secretary General, 2011, 2015, 2016



Source: The data at Table no.15

Drawing comparison between the oil reserves and production in Arab countries and other global groups, it is clear that there is a great potential for Arab countries to increase their current and future production capacity due to the size of the huge reserves available. The production of the Arab countries is less than one third of the world's oil production which is relatively small and does not match its huge reserves. The Arab countries have more than half of the world's proven oil reserves. On the contrary, other international groups such as the Commonwealth (Independent States) which accounted for 17.14% of the world's production while their share does not exceed 9.32% of the total world reserves, and the North American countries which accounted for 18.56% of world production while their reserves constitute 4.22% of the total, and the North Sea region whose production accounted for 3.12% of the total while its reserves did not exceed 1% of the total global reserves.

### 2.3 Global Oil Exports

The total global oil exports which include crude oil and oil products increased over the period 2006-2015. The exports rose from 60.96 million barrels /day in 2006 to 69.79 million barrels /day in 2015, i.e. increment by 8.83 million barrels /day or by annual growth rate 1.51%. See in Table no- (16)

The Arab countries witnessed an increase in their total oil exports. The exports rose from 19.24 million barrels/day in 2006 to 20.89 million barrels/day in 2015, i.e. increment by 1.65 million barrels /day or by annual growth rate of 0.92% which is lower than the annual growth rate of world exports (1.51%) during the same period. As a result this, their share of the global total Export declined from 31.51% in 2006 to 29.93% in 2015.

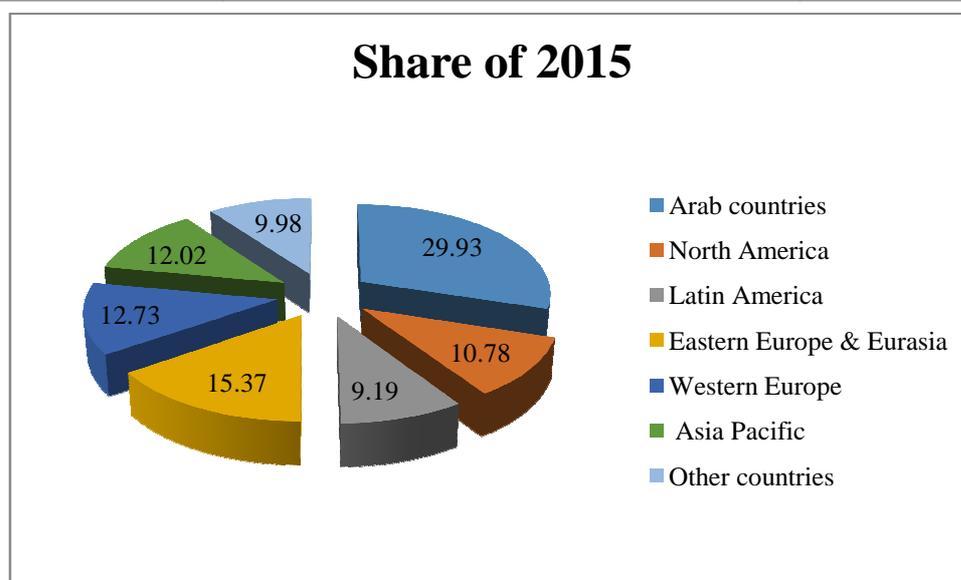
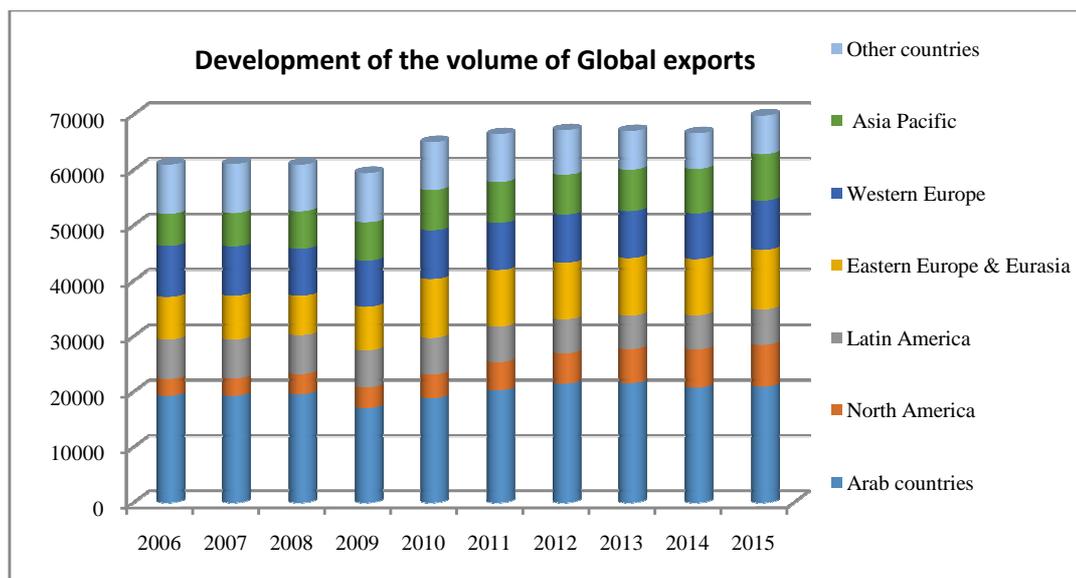
Table No-(16)

#### Development of the volume of Global exports

Figures in Thousand barrels / day

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Share of 2015
<b>Arab countries</b>	19241.4	19243.8	19521.3	16998.9	18827	20232	21396	21495	20711.1	20891.8	29.93
<b>North America</b>	3026.6	3095.1	3650.4	3755.7	4258	5081	5488	6188	6915.1	7522.7	10.78
<b>Latin America</b>	7130.1	7026.6	6989.0	6704.0	6588	6427	6126	6035	6147.5	6411.4	9.19
<b>Eastern Europe &amp; Eurasia</b>	7656.2	7894.1	7108.2	7843.3	10616	10156	10196	10356	10125.6	10726.4	15.37
<b>Western Europe</b>	9224.7	8901.8	8464.8	8319.1	8778	8512	8693	8493	8250.6	8884.9	12.73
<b>Asia Pacific</b>	5786.9	6053.8	6798.9	6903.7	7309	7386	7200	7453	8009.7	8392.6	12.02
<b>Other countries</b>	8895.7	8864.0	8421.1	8897.6	8626	8621	8068	6990	6435.9	6965.1	9.98
<b>Total World</b>	60961.5	61079.2	60963.7	59422.4	65004	66415	67168	67010	66595.4	69794.8	100%

Source: Organization of the petroleum exporting countries OPEC, Annual Statistical Bulletin, 2010, 2015



Source: The data at Table no.16

When comparing the share of the Arab countries in the total world oil exports by the end of 2015 with other global groups or regions, they are ranked first place among the global groups. Eastern Europeans and Eurasia came in second place with 15.37% of the global total Export, Western Europeans came in the third place with 12.73%, Asia Pacific ranked fourth with 12.02% followed by North America with 10.78% in fifth place, in the sixth place is the rest of the Middle East and Africa by 9.98% and finally in seventh place is Latin America by 9.19% of the total global export for the year of 2015.

It is noteworthy that the rise in the net quantities exported from oil and petroleum products of the Arab countries as compared to the rest of the global groups, when balancing oil exports with imports according to global groups in 2015, the Arab countries achieved a surplus in the oil balance by 18.63 million barrels /day compared with the deficit of other global groups such as Asia Pacific where the deficit reached

(-21.98) million barrels / day, Western Europe (-8.86) million barrels /day and North America (-2.73) million barrels /day. See Table no-(17)

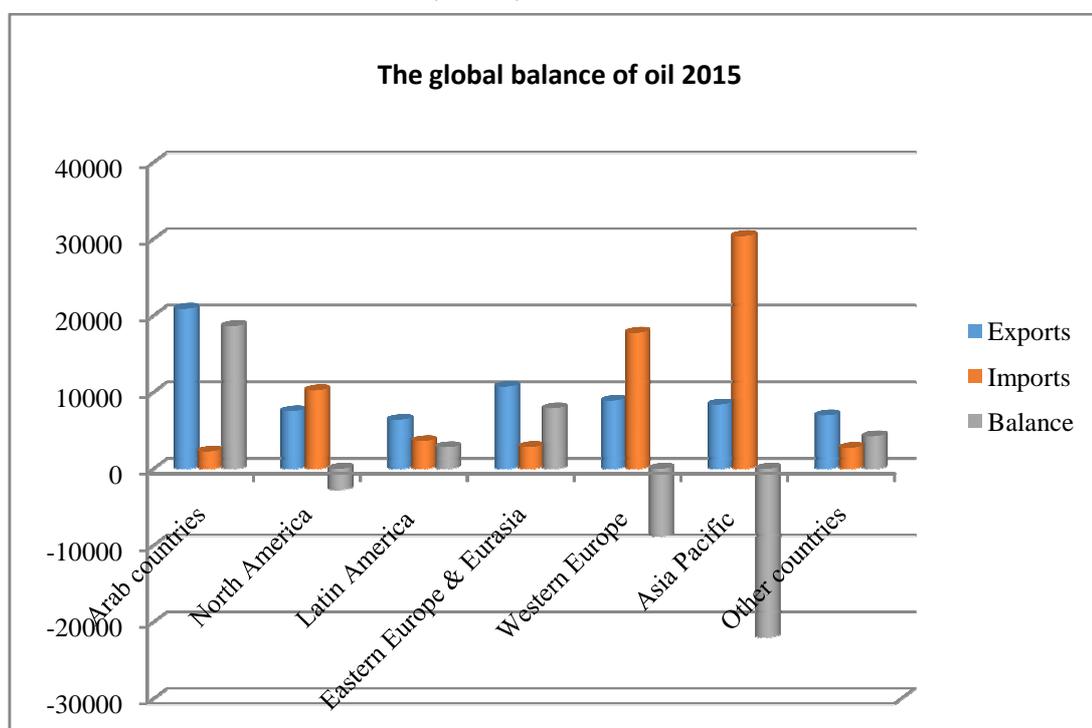
Table No-(17)

### The global balance of oil 2015

Figures in Thousand barrels / day

	Arab countries	North America	Latin America	Eastern Europe & Eurasia	Western Europe	Asia Pacific	Other countries	Total World
<b>Exports</b>	20891.8	7522.7	6411.4	10726.4	8884.9	8392.6	6965.1	69794.8
<b>Imports</b>	2261.0	10255.2	3604.5	2842.3	17750.8	30378.6	2717.8	69810.1
<b>Balance</b>	18630.8	-2732.5	2806.9	7884.1	-8865.1	21986.0	4247.3	-15.3

Source: Organization of the petroleum exporting countries OPEC, Annual Statistical Bulletin, 2010, 2015



Source: The data at Table no.17

## 2.4 The Future Role of the Arab Countries in the Global Oil Market

After reviewing the important place of the Arab countries in the global oil market above through presenting abundant reserves of the proven oil and high levels of production and export in addition to the surplus in the oil balance enjoyed by the Arab countries, all of these are considered competitive advantages that will enhance the active and pivotal role that the Arab countries hopefully to play in the future of the oil market.

### 2.4.1 The Future Status of the Oil Market

The future status of the oil market will be by reviewed through the expectations of global demand and oil supplies until 2040.

#### 2.4.1.1 Forecast of global Oil Demand Up to 2040

Looking at the forecast world oil demand for oil from different sources, it is clear that the picture is not very different from one source to another. Based on the baseline scenario of the Energy Information Administration of the US Department of Energy, global oil demand is expected to rise by about 17.6 million barrels /day over the period 2015-2040 with an annual growth rate of 0.7% to reach 112.9 million barrels /day in 2040 compared to 95.3 million barrels /day in 2015. See Table no- (18)

According global groups, the demand for oil in the industrialized countries (Organization Economic Co-operation and Development) is expected to decline by 1.4 million barrels /day, a decrease rate annual of (-0.1%) over the same period to reach 44.7 million barrels in 2040 that is equivalent to 39.6 % of the total world demand for oil compared to 46.1 million barrels /day in 2015, equivalent to 48.4% of the total world demand for oil.

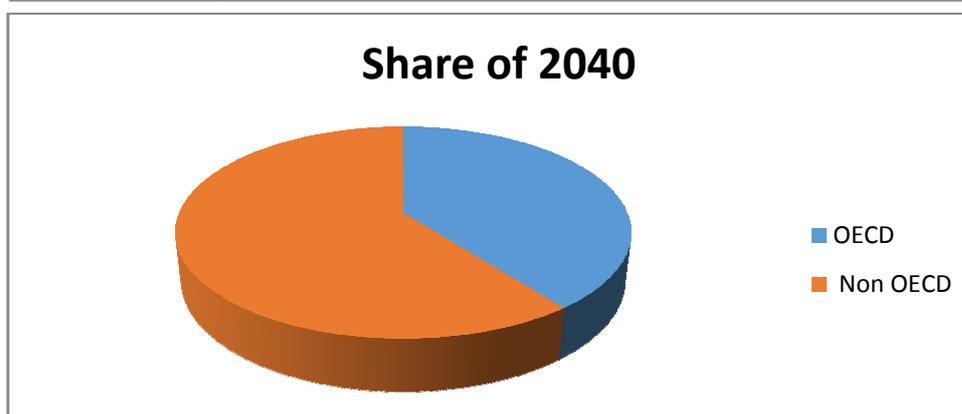
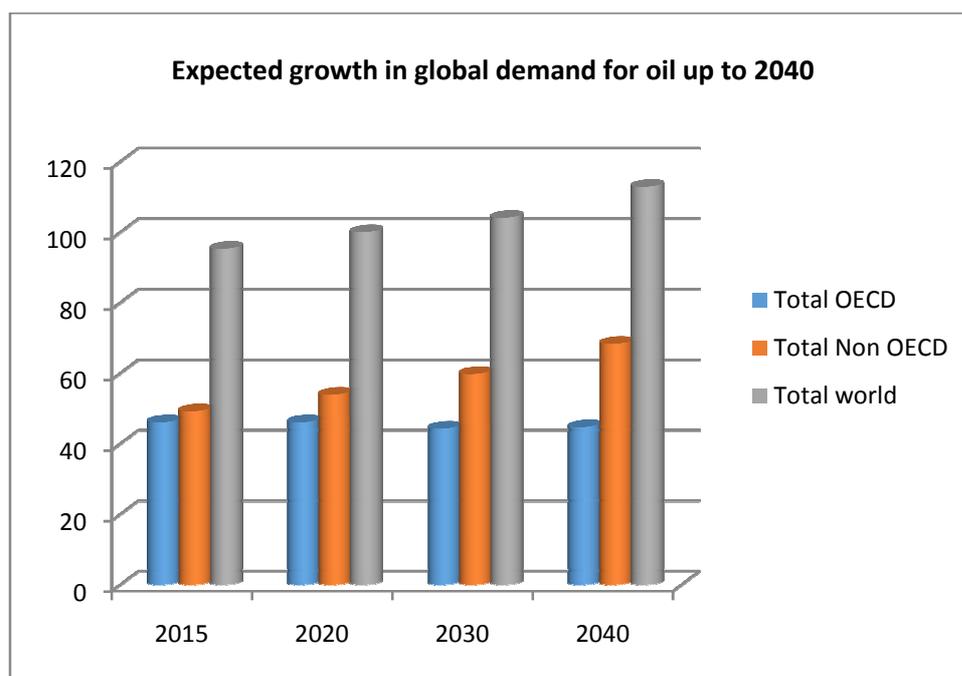
**Table No-(18)**

#### Expected growth in global demand for oil up to 2040

Figures in Million barrels /day

	2015	2020	2030	2040	Annual growth rate 2015-2040
<b>Total OECD</b>	46.1	46.1	44.3	44.7	- 0.1
<b>Share of the world</b>	48.4	46.1	42.6	39.6	
<b>Total Non OECD</b>	49.2	53.9	59.8	68.3	1.3
<b>Share of the world</b>	51.6	53.9	57.4	60.5	
<b>Total world</b>	95.3	100	104.1	112.9	0.7

Source: Energy Information Administration EIA, International Energy Outlook 2017



Source: The data at Table no.18

With regard to the developing countries are expected to witness an increase in oil demand by 19.1 million barrels /day with an annual growth rate of 1.3% over the forecast period to reach 68.3 million barrels /day which is equivalent to 60.5% of the total global demand for oil in 2040 compared to 49.2 million barrels /day equivalent to 51.6% of the world's total oil demand. This will lead to a change in the geographical map of the sources of global demand for oil so that the group of non-industrialized countries will become the main source and the first world demand of oil until 2040.

According to OPEC's baseline scenario, global demand for crude oil is expected to increase by 16.4 million barrels /day over the period 2015-2040 with an annual growth rate of 0.7 % to reach 109.4 million barrels /day in 2040 compared 93 million barrels /day in 2015. See Table no-(19)

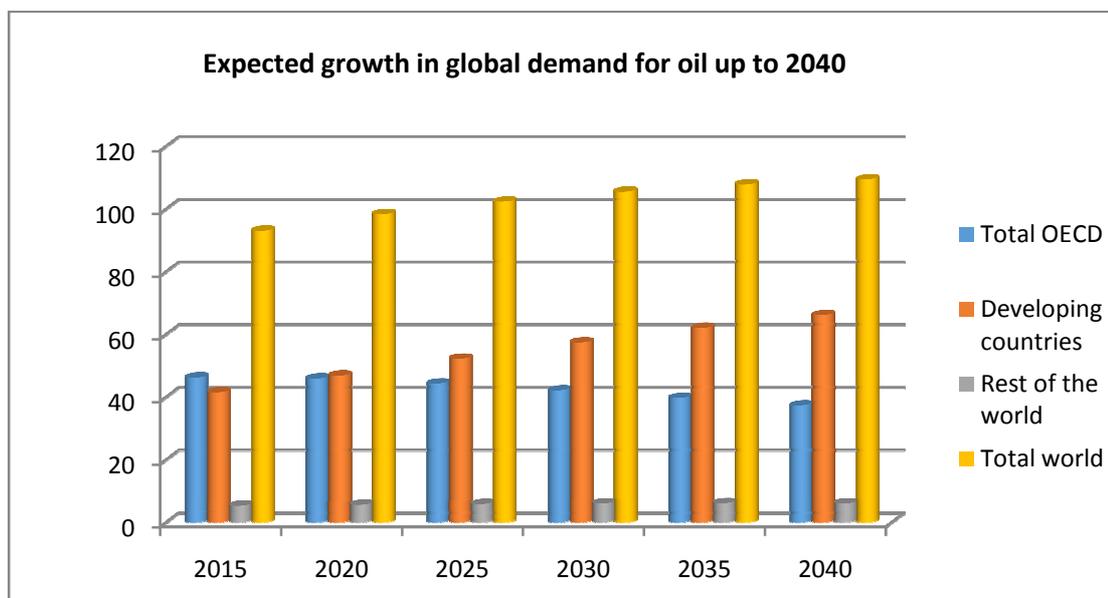
According to same source estimates, the industrialized countries (OECD) are expected to witness a decline in demand for oil by about 8.9 million barrels /day over the forecast period or an annual drop of (-0.9 %) to reach 37.3 million barrels /day in 2040, or 34.1% of the total world oil demand compared to 46.2 million barrels/day in 2015 that is equivalent to 49.7% of the total world demand for oil.

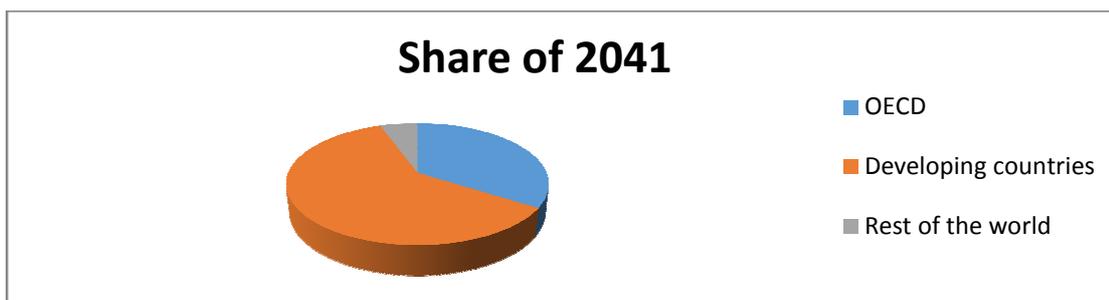
Table No-(19)  
**Expected growth in global demand for oil up to 2040**

Figures in Million barrels /day

	2015	2020	2025	2030	2035	2040	Annual growth 2015-2040
<b>Total OECD</b>	46.2	45.9	44.3	42.1	39.7	37.3	-0.9
<b>Share of the world</b>	49.7	46.7	43.3	39.9	36.8	34.1	
<b>Total Non OECD</b>	41.5	46.8	52.2	57.4	62.0	66.1	1.9
<b>Share of the world</b>	44.6	47.6	51.0	54.4	57.5	60.4	
<b>Rest of the world</b>	5.3	5.6	5.8	6.0	6.1	6.0	0.5
<b>Share of the world</b>	5.7	5.7	5.7	5.7	5.7	5.5	
<b>Total world</b>	93.0	98.3	102.3	105.5	107.8	109.4	0.7

Source: Organization of the Petroleum Exporting Countries (OPEC) , World Oil Outlook 2016





**Source:** The data at Table no.19

In contrast, the group of developing countries is expected to witness an increase in demand for oil by about 24.6 million barrels /day with an annual growth rate of 1.9% to reach 66.1 million barrels /day in 2040 that is equivalent to 60.4% of the total global demand for crude oil compared to 41.5 million barrels /day in 2015 equivalent to 44.6% of the total global demand.

#### 2.4.1.2 Forecast of Global Supply of Crude Oil Up to 2040

Oil supply depends on the practices of many different economic institutions such as international oil companies, national oil companies, independent producers and OPEC producing countries. (Klostofer, 2011)

Looking at the forecast for oil supplies from different sources, it is clear that there is a difference from one source to another, the US Energy Information Administration expects global crude oil supply to grow by 12 million barrels /day over the period 2015-2040 with an annual growth rate of 0.6% to reach 92.3 million /day in 2040 compared to 80.3 million barrels /day in 2015. See Table no-(20)

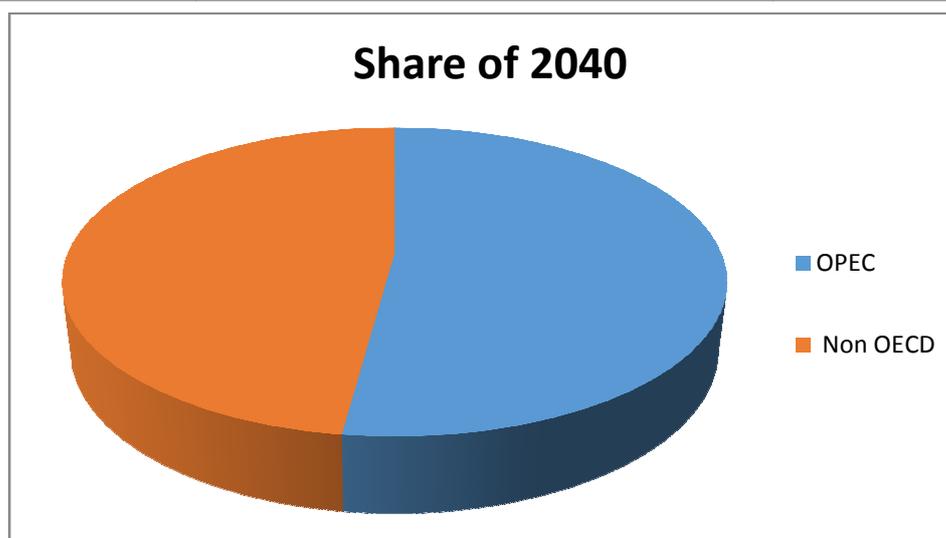
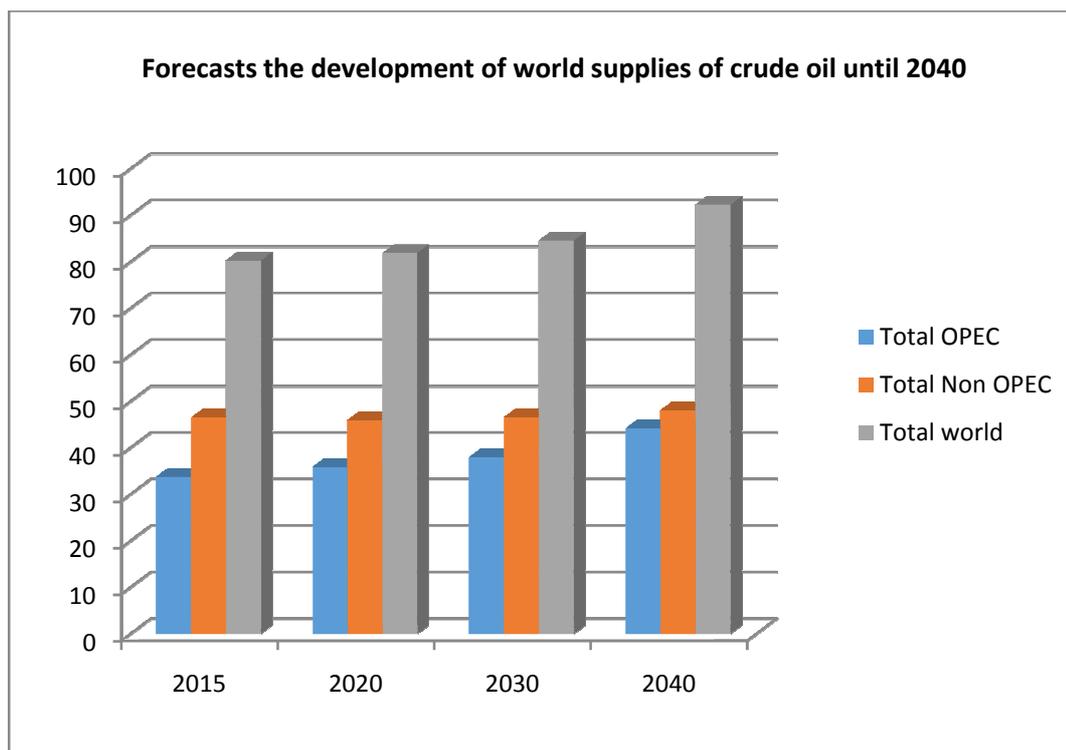
Table No-(20)

#### Forecasts the development of world supplies of crude oil until 2040

Figures in Million barrel /day

	2015	2020	2030	2040	Annual growth 2015-2040
<b>Total OPEC</b>	33.8	35.9	38.0	44.2	1.1
<b>Share of the world</b>	42.1	43.8	44.9	47.9	
<b>Total Non OPEC</b>	46.5	46.0	46.6	48.1	0.1
<b>Share of the world</b>	57.9	56.2	55.1	52.1	
<b>Total world</b>	80.3	81.9	84.6	92.3	0.6

Source: Energy Information Administration EIA, International Energy Outlook 2017



**Source:** The data at Table no.20

According to estimates by OPEC, it is clear that the volume of global supplies of crude oil is expected to grow by 6.1 million barrels /day over the same period with an annual growth rate of 0.3% to reach 80.6 million barrels /day by 2040 compared to 74.5 million barrels /day in 2015. See Table no-(21).

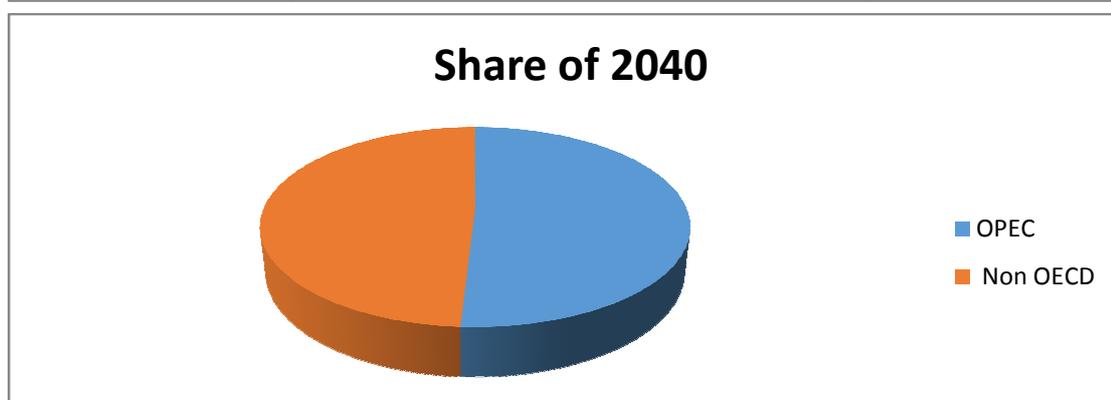
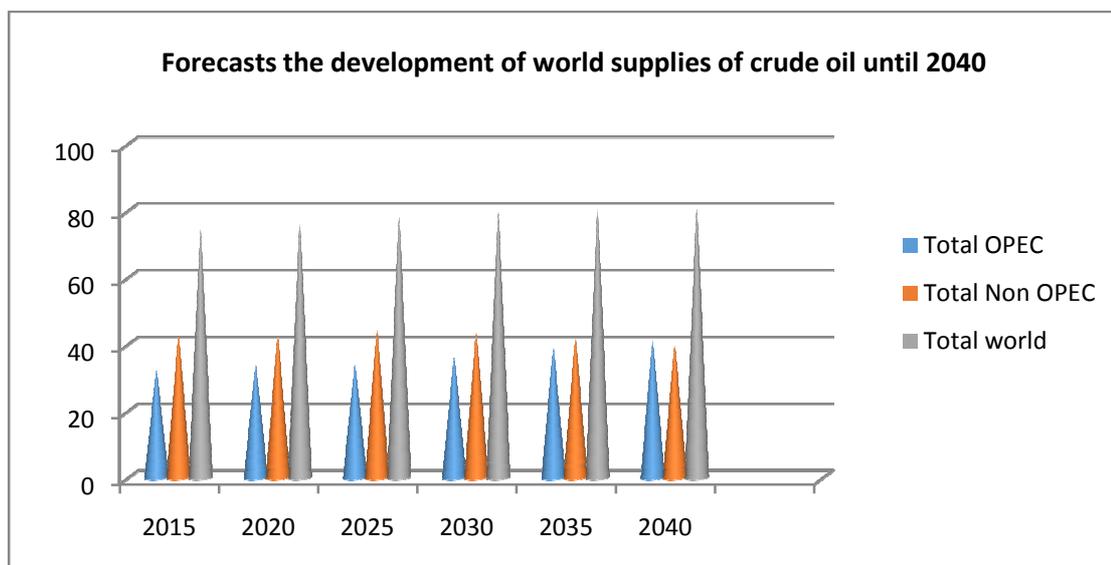
Table No-(21)

**Forecasts the development of world supplies of crude oil until 2040**

Figures in Million barrels /day

	2015	2020	2025	2030	2035	2040	Annual growth 2015-2040
<b>Total OPEC</b>	32.0	33.7	33.8	36.0	38.7	41.0	1.0
<b>Share of the world</b>	42.9	44.2	43.3	45.3	48.2	50.9	
<b>Total Non OPEC</b>	42.5	42.5	44.2	43.4	41.6	39.6	-0.3
<b>Share of the world</b>	57.1	55.8	56.7	54.7	51.8	49.1	
<b>Total world</b>	74.5	76.2	78.0	79.4	80.3	80.6	0.3

Source: Organization of the Petroleum Exporting Countries (OPEC), World Oil Outlook 2016



Source: The data at Table no.21

The world's oil supply has been classified into the supply of OPEC countries and the supply of non-OPEC countries because of the different production policies adopted by both groups. The non-OPEC countries follow the policy of production and

marketing at their full capacity individually, while the OPEC countries (together) take upon themselves the responsibility of market surveillance to balance supply and demand to meet the surplus world demand for oil from non-OPEC supplies. (Eltaher, 2011)

There is a wide spread belief that non-OPEC oil supplies have not grown rapidly for a number of reasons: low productivity, financial conditions, political risks and supply surrounding uncertainties particularly with regard to investment response to high uncertainty. In addition to a key feature of the non-OPEC supply is that its marginal cost is increasingly high. (Balakla, 2013)

#### **2.4.2 The Importance of the Arab Countries in the World Oil Supply Until 2040**

The Arab countries that are members of the Organization of Arab Petroleum Exporting Countries (OAPEC) have huge oil reserves with low production costs and are expected to play a major role in meeting the largest part of the increase in demand for oil in the future, Particularly the Arab countries that are members of Organization Petroleum Exporting Countries (OPEC), which control most of the OPEC's crude oil reserves and have a significant role in decision-making. These countries are (Saudi Arabia, Libya, Algeria, UAE, Iraq, Qatar and Kuwait). Based on Annual Statistical Bulletin, (OPEC) in 2015, these countries account for about 58% of OPEC's total oil reserves in 2014, and 68% of OPEC's total crude oil production and 70 % of total oil exports over the same year.

According to the US EIA, oil supplies from (OPEC) countries, including Arab countries is expected to increase by 10.4 million barrels /day at an annual growth rate of 1.1% to reach 44.2 million barrels in 2040- equivalent to 47.9 % of the world's total crude oil supply compared to 33.8 million barrels /day in 2015-equivalent to 42.1% of the total global supplies of oil. See table no-(20)

The crude oil supply from non-OPEC producers is expected to increase by 1.6 million barrels /day at an annual growth rate of 0.1 % to reach 48.1 million barrels /day in 2040 -equivalent to 52.1 % of the total global crude oil supply compared to 46.5 million barrels /day in 2015-equivalent to 57.9% of the total global supplies of crude oil.

According to OPEC's baseline scenario; most of the expected increase in global demand for oil is expected to be met by OPEC's supply of which Arab countries contribute the largest share. According to OPEC estimates, OPEC supply is expected to increase by nearly 9 million barrels /day at an annual growth rate of 1.0% to reach 41.0 million barrels /day in 2040-equivalent to 50.9% of the total world crude oil supply compared to 32.0 million barrels /day in 2015-equivalent to 42.9% of the world's total crude oil supply, See table no-(21)

On the other hand, crude oil supply from non-OPEC producers is expected to fall by 2.9 million barrels /day with a decrease of (-0.3%) per year to reach 39.6 million barrels /day in 2040-equivalent to 49.1 % of the total global production compared to 42.5 million barrels per day in 2015-equivalent to 57.1% of the world total.

### **3. Potential implications of Developments in the Indian Oil Balance on the Arab Oil Exporting Countries**

According to the baseline scenario of OPEC, it is clear from the above that the volume of the expected increase in energy demand in India between 2015 and 2040 will range between 25.2 million barrels of oil equivalent /day regards less of the

assumptions made by this scenario. The size of this increase is a clear indication of the impact of this increase on the global energy markets in general and on the Asian energy markets in particular. In terms of oil, which is of particular importance to the Arab countries, According to the baseline scenario of OPEC, the volume of the increase in demand for it will range between 4.3 million barrels /day, and 6.3 million barrels /day.

Based on these expectations about the increase in demand for oil in India and the likelihood of not increasing domestic production, and based on the geographical distribution of India's imports in addition to the status of the Arab countries in the oil market in the future based on the huge oil potential of the Arab countries, especially the members of the OAPEC and its geographical location west of India, it is expected to be the bulk of India's imports of crude oil from Arab countries, especially the OAPEC. Accordingly, it is expected that the volume of increase in exports of Arab oil producing countries to India will be between 2.66 - 3.89 million barrels /day in 2040. Therefore, the total volume of exports of these countries to India will be between 4.76 - 5.99 million barrels /day compared to 2.1 million barrels /day 2011/2012.

### **Conclusions and Recommendations**

Based on the analysis of the oil situation in India and the Arab countries, the following points can be concluded:

#### **The Current Situation**

- ✓ India became the third largest energy consumer in the world after China and the United States in 2015, and India's share of the total global primary energy consumption doubled from 3.4% in 2006 to 5.3% by 2015.
- ✓ India became the third largest oil consumer in the world after the United States and China in 2015 and doubled its share in the total global consumption of oil from 3.2% in 2006 to 4.5% in 2015.
- ✓ India's oil consumption rose at an annual growth rate of 5.5% in 2006-2015 and despite its low contribution to met energy requirements, it still ranks the second in the energy after coal by 28% in 2015.
- ✓ India has three main sectors of oil consumption: the transport sector, the industrial sector, and the other sectors (domestic, agricultural and commercial). In 1995, these sectors consumed 95% of the total final consumption of energy. Transport sector came in the first place with 45% of total primary energy consumption, the industrial sector by 27.5%, and other sectors by 22.5% of the total.
- ✓ India's oil production covered only 27.77% of the domestic oil consumption in 2006 and then fell to 21.06% in 2015 due to increasing in consumption and declining in production. The degree of India's dependence on oil imports to cover the domestic demand increased from 72.23 in 2006 to 78.94% of the total production in 2015.
- ✓ India's imports of crude oil rose from 2.21 million barrels /day in 2006 to 3.94 million barrels /day in 2015 with an annual growth rate of 6.6%. India imported about 733 thousand barrels /day of petroleum products in 2006. The volume of these imports receded to reach 637 thousand barrels /day in 2015 with a decline rate annual of (-1.5 %).
- ✓ India's imports of crude oil from Arab countries increased by 1.12 million barrels /day that is equivalent to 70.88% of the total increase in the total oil imports with an annual growth rate of 7.03% over the period 2001/2002 to 2011/2012 to reach 2.13 million barrels /day in the year 2011/2012 compared

to 1.01 million barrels /day in 2001-2002. There are four major Arab countries exporting oil to India. These countries are Saudi Arabia, Iraq, Kuwait and UAE. The imports of India from these four countries constitutes more than half (52.5%) of total imports over the fiscal year 2011/2012.

### **Future Situation**

- ✓ India's relative importance in the global energy consumption is expected to increase in the coming years for two main reasons: the expected increase in population and the expected growth of the Indian economy. According to OPEC estimates, India is expected to witness population growth at an annual rate of 0.89% over the period 2015-2040. India is also expected to record the highest annual growth rate in the world gross domestic product, including China about 6.9% over the same period.
- ✓ India's energy demand is expected to rise by 25.2 million barrels/ day during the period 2014-2040, with an annual growth rate of 3.8%. According to this, the demand for energy in 2040 will be about 41.2 million barrels of oil equivalent / day.
- ✓ India's oil demand is expected to rise by 4.3 to 6.3 million barrels /day during the period 2015-2040 at an annual growth rate of 2.96% to 3.79%. According to these rates, demand for oil in 2040 will range from 8.3 to 10.4 million barrels /day.
- ✓ The transportation sector is expected to play a pivotal role in the future consumption of oil in India. The Annual growth rate in this sector is expected to reach 5.1% over the period 2015-2040, with its share of the total oil consumption increasing to 59.1% in 2040, followed by the industrial sector that will witness an annual growth rate of 3.0% but is expected to decline its share to 21.9% of the total. Other sectors will witness an annual growth rate of 0.7%, with their share also falling to 16.2% of the total.
- ✓ The share of the domestic production in meeting India's demand for oil is expected to drop from 22.0% in 2015 to only 5.8% in 2040. This means that India's dependence on oil imports to cover the domestic demand for oil will rise from 78.0% in 2015 to 94.2% 2040.
- ✓ The volume of exports of the Arab oil producing countries to India is expected to be between 2.60 - 3.81 million barrels /day in 2040. Therefore, the total volume of exports of these countries to India is expected to reach between 4.70 - 5.91 million barrels /day compared to 2.1 million barrel /day in 2011/2012.

Based on India's future relative importance in the strategic, economic and oil terms, India is a vital field and a huge market for oil exports from Arab countries. Accordingly, the study recommends that this promising market should be given more attention. Where must be a state of certainty of ensuring global demand for oil in the medium term especially the concept of energy security for India corresponds to the energy security of the Arab oil producing countries.

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