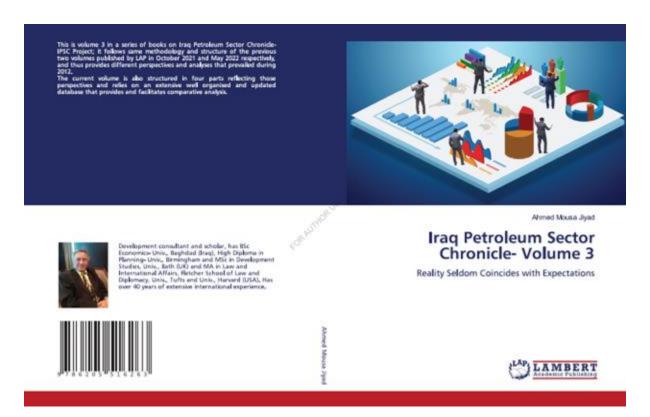
The Preface and Introduction for IPSC Third Book

Ahmed Mousa Jiyad Development Consultancy & Research Norway

My third book **Iraq Petroleum Sector Chronicle- Reality Seldom Coincides with Expectations** was published by Lambert Academic Publishing-LAP a few days ago; it covers 2012 as part of an ongoing IPSC Project.

This article comprises the **preface** and the **introduction** of the third book. The Preface was kindly written by the prominent petroleum professional expert and former twice Minster of Oil and Deputy Prime Minister for Energy **Thamir Al-Ghadhban**



Preface

Petroleum sector is the backbone of the Iraqi economy; it was, it has been, and it will remain so for the foreseeable horizon. Many Iraqis, including me, firmly hold an opinion that in Iraq, oil is politics and politics is oil. This is a recognition and affirmation of an unavoidable organic intertwinement of both spheres resembling the pillars of the political economy of Iraq petroleum, as both witnessed and were subjected to very dramatic effective and unprecedented changes post 2003 Iraq; this is essential premise in understanding the developments, regardless of their direction, in the petroleum sector.

Ahmed Mousa Jiyad is among many Iraqi oil specialists who persistently, emphatically, and professionally contributed, from outside the box and the country, in enhancing, by actively engaging in, the debate on various petroleum issues during the last two decades.

The current book on 2012, a third in a row, is a manifestation of his pervasiveness, enthusiasm, and determination.

Indeed, 2012 was a year of reflection and revision, particularly regarding upstream petroleum development projects and related contracts. Hence, the subtitle of the current book, reality seldom coincides with expectations, accurately manifests the then prevailed environment, discourse and thinking tendencies.

Two important activities and their related publications must be mentioning in this respect; I was instrumental and directly involved in both in my capacity as Chairman of Prime Minister's Advisory Committee-PMAC.

The Iraqi government and the World Bank singed on January 2010 an agreement that led to a jointly financed contract signed on July same year with an international consulting firm, Booz & Company. The contract was about conducting through comprehensive study on the energy sector in the country. The duration of the contract was 18 months, the bulk of its related activities was done in 2012, leading to formulation of the main ingredients of the Integrated National Energy Strategy; the first of its kind ever done on Iraq.

Parallel to INES mission, we had cooperated to undertake another unique and, again, a first of its kind activity; that was with the International Energy Agency-IEA. The Agency convened two workshops, in London and Istanbul, and follow-up activities that gave fruition by publishing, Iraq Energy Outlook-World Energy Outlook Special Report 2012.

My keynote speech, at CWC conference on IRAQ MEGAPROJECTS 2012, October 2012, Dubai- UAE, addressed INES, IEA report, the status of other mega project and the political milieu in the country during 2012, among other important issues. I adopted what prevailed then a mixture of conventional wisdom and cautious optimism; had Iraqi governments implemented INES recommendations; not only investing in the development and expansion of the Energy sector but reforming it, modernizing of the Public sector plus unleashing the power of the Private sector as well, then Iraq would have become the most dynamic business center in the Middle East.

Reviewing the current volume of the book refreshes vividly all circumstances relating to those important events of 2012 and the complexity of the environment surrounding them. The author had carefully selected and included many diverse articles reflecting broad spectrum of views on various development that took place in that year; these are included in parts one and two of this book.

Data and statistics are usually very helpful and fundamental component in seeing the full picture and comprehend what might lied behand the development in an aggregated way; they are the material evidence on reality. Obviously, the author had compiled and accumulated a wealth of data and statistics as part four of the book clearly reveals. This particular part in this volume contains very visible qualitative and methodological additions and improvements comparable to the previous two volumes of the book series.

I have known Ahmed for years, we meet occasionally in conferences on Iraq in Baghdad, in Istanbul or in London; we maintain good, continued communication and I receive regularly his thought provoking, and for some at high offices are annoying articles, emails and

commentaries; part one of the current volume comprises some of what he had written during 2012.

Four matters about this book have actually captured my attention and I found it helpful to highlight; first, it is a third in this, apparently, series of annual books that document the development in the three sub-sectors of petroleum in the country; each volume builds on and is a continuation of the previous ones.

Second, the three volumes of the book adopt similar methodological approach that present very wide spectrum of views, and thus, each volume, in its own rights is a rich document comprising diverse perspectives, insights and carefully compiled data from formal, known, and verifiable sources.

Third, each volume of the book is a "time specific"; the current third volume comprises what was written or said in 2012 exactly "as is/was" originally published without any substantive edition. This is extremely valuable and helpful in understanding the changing dynamics of petroleum development, decisions, and policies in retrospective, rather than re-visiting or rewriting those publications.

Finally, the author must have exerted much research work efforts, persistent follow-up and continually updating good and well organised database that permit maintaining such participatory approach in each volume. This clearly indicates that more volumes of this publication are or should be forthcoming.

In introducing to us volume one of Ahmed's book, my colleague Tariq Shafiq writes," Ahmed Jiyad's outstanding collection of essays and research provides a fascinating and invaluable insight into understanding the complexities of Iraq's petroleum sector politics and related issues". Similarly, my colleague Walid Khadduri wrote, in his preface to Ahmed's volume two book," Jiyad's pioneering research of the industry has set a precedent for a transparent and thorough research process for investigating the oil industry in an OPEC state, one which is hoped would be replicated in future writings."

It gives me a great pleasure in joining my colleagues Tariq Shafiq and Walid Khadduri for commending Ahmed's persistence research efforts and positive professional contributions in documenting the development of the petroleum sector in the country and urge him to expedite the publication of the forthcoming volumes of his outstanding series of books on Iraq Petroleum Sector Chronicle.

Thamir A. Al-Ghadhban

Former Minister of Oil, (1June 2004 -10 May 2005)

Former Chairman of Prime Minister's Advisory Commission- PMAC (3 Dec 2006 -12 June 2015)

Former Deputy Prime Minister for Energy and Minister of Oil (25 Oct 2018 - 7 May 2020)

Baghdad/Amman November 2022

INTRODUCTION

Iraq Petroleum Sector Chronicle-IPSC is my major research and publishing project; it comprises a series of books/volumes, each is time-specific devoted for one year or period, published under the same title but with different sub-titles, reflecting the main trends that dominate the debate and attention then.

This is the third book in this series; the first two were published by Lambert Academic Publishing-LAP in October 2021 and May 2022 respectively. I am planning to publish further volumes covering years 2013 onwards, since I have done already the basic research, have the needed documents and compiled related statistics in my Database.

IPSC research and publishing project is one fruition of many decades of constant meticulous follow up and involvement efforts, and more than six decades since my direct engagement with the Ministry of Oil.

The purpose behind IPSC is to make the books convenient references for those interested in Iraqi petroleum sector, to understand the complexity of related issues and to know the nature and depth of the discourse that prevailed in each year and positions taken by different parties; what, when by whom and, probably, why!!

The research methodology for IPSC project is premised on a set of pillars, guiding principles and ethics.¹

As a reminder to and re-connect with the two previous volumes, the first volume of this book covers the development in the upstream petroleum in Iraq prior to 2011 and has a subtitle "Grand Opening for Big Push Strategy". The subtitle reflects the mood, sentiments, actions and views that prevailed then both inside and outside Iraq, expecting Iraq to be a game changer in the international petroleum scene; that was premised on the concluded service contracts pursuant to the bid rounds, particularly the first and the second bid rounds, as evidenced by the contents of volume one of the book, which was published in October 2021. Signs of powerful restraints began to emerge and thoughts for revisions were contemplated during 2011. Hence, the subtitle for the second volume reflects that dramatic shift from high expectations originally formulated after concluding the above-mentioned contracts; it is "A Game Changer, No More", and that volume was published in May 2022.

The subtitle for this third book is, "Reality Seldom Coincides with Expectations"; it is in fact a logical continuation or extrapolation of the subtitle for the previous volume.

From macroeconomics and structural perspectives, the shape of the Iraqi economy in 2012 continued to be lopsided with heavy dependency on export of natural raw material, i.e., crude oil, as was highlighted in the previous two volumes of this book. The modest unbalanced growth that had accumulated by the end of 1970s began eroding and all economic accomplishments had washed away, gradually, since then. Four decades of wars, sever sanctions, political tyranny and America-led occupation pushed the country into the brinks of a failed state.

The domestic political economy and political order of post occupation sectarian sharing system, known in Iraq *al-muhasasa*, continue to inflict the most devastating manifestation of "resource curse" in the form of formalized legalized high-level corruption, or Kleptocracy. When upstream petroleum became, once again but more urgently, the only sector capable for funding annual state budget for social welfare, reconstruction, and development, it became the target for the corruptors, the Kleptocrrats and domestic politics abuse. Also, under the then prevailed political order with the second term of Al-Maliki government, upstream petroleum redevelopment and development continued through active and substantive participation of the international oil companies- IOCs.

2012 witnessed as many achievements as setbacks; a few are highlighted here while contents of the four parts of the current volume provide more details and analysis on various and divers developments occurred in the petroleum sector during and prior to that year.

Attention to and debating the likelihood of attaining oil production plateau targets envisaged under and contracted according the first two bid rounds were intense, strongly visible and reoccurring; focusing on and questioning both the magnitude of such target as well as the timeframe to attain them whether that on the aggregate or on the fields level. In this regard, two important activities resulting in two impressive, thorough, and participatory studies on the energy sector actually captured much of the attention in that year. The number and substance of articles, reviews, interviews, workshops, and commentaries included in parts one, two and three of the current volume testifies the importance of these ever-done studies of their kind; these are the Integrated National Energy Strategy- INES and Iraq Energy Outlook- IEO.

INES was a jointly financed study by the Iraqi government and the World Bank, a contract was awarded to an international consulting for, Booz & Company for this mission. The 18-month study was initiated by the Prime Minister's Advisory Commission- PMAC and was supervised by a Project's Steering Committee- PSC comprising selected PMAC members and senior representatives from many ministries. Much of the mission efforts was done in 2012. Parallel to INES, Iraq and the International Energy Agency- IEA cooperated for the first time to produce another significant study after holding two widely attended workshops, in London and in Istanbul, and follow-up meetings; those efforts resulted in publishing Iraq Energy Outlook- World Energy Outlook Special Report in October 2012.

The fourth bid round took place in Baghdad in May 2012; it was for exploration blocks and offered the usual long term service contracts, with some modifications reflecting the nature and particularities of exploration activity in petroleum industry. Four blocks, out of offered 12, were eventually contracted and two of them became producing fields in a rather short period; this manifests the known high discovery success ratio that characterizes Iraq petroleum potential. However, some said that contract terms had contributed to only one-third of the offered blocks did receive a bid.

Earlier and on similar footing, Ministry of Oil announced its first new oil field discovery in 30 years, the then Oil Minister Abdul Karim al-Luaibi holds a jar of crude from the newly

discovered Dima oil field in Missan province during a press conference held on 18 January 2012, at the Ministry headquarter in Baghdad.

The first two single-point moorings-SPMs, each has a nameplate capacity of 900kbd, were installed and became operational in 2012, contributing to boosting crude oil exports from the southern export terminal in Basrah province on northern Arabian Gulf; SPMs are part of Iraq Crude Oil Export Expansion Project-ICOEEP overseen by US Foster Wheeler and close to 200 Smit Lamnalco employees will be deployed to service the ICOEEP through three years O&M contract signed in September 2012.

Calls for new and rehabilitating export pipelines through Jordan, Syria and Turkey intensified in 2012, but nothing of substance materials as the year come to it close. Part three of this volume contains more news on those pipelines.

KRG petroleum attracted more attention in 2012 as manifested by the growing number of articles, commentaries and interviews that appeared on the screen of global petroleum industry. That marked focus was premised on and impacted by ExxonMobil concluding many production sharing contracts-PSCs with KRG, and the continued strain of awkward relations between KRG and the Federal Government. Many items in Part Three of this volume had, obviously, overestimated that move and, with passing time such assessment proven far from reality, and ExxonMobil had practically abandoned the region. A lengthy item representing KRG formal views is included in Part Two.

Talking about ExxonMobil, this IOC had announced in February 2012 it intends to exit West Qurna1 oilfield in southern Iraq; as at the time of drafting this volume, the company is still present in the oilfield, but leaving soon.

Major efforts by the Ministry of Oil and National Investment Commission-NIC offering a number of new modern refineries for private investments did not deliver tangible results. MoO had contracted many known international firms to undertake Front End Engineering and Design-FEED studies for a number of Euro5 standard new refineries. Lack of investors' interests prompted the government, in November 2012, to finance the construction of 150kbd in Karbala, to be completed in four years; the first production test was done ten years later.

This volume comprises four parts, in addition to Preface, Introduction, Table of contents and Abbreviations.

Part One contains a selection of my own essays and research work published in 2012. Each of my "Essays..." has its own methodology, structure, assumptions, analysis, discussion and consulted references; information on each essay was provide, when and where it was published and the web-link to access it, if that is permissible by the related websites.

In addition to my articles, this volume includes an important formal communication pertaining to contract amendment, an interview, and a co-authored position statement on competitive bidding.

Part Two of the book comprises views of and positions taken by some selected well-known Iraqi oil professionals, senior government officials and others aiming at presenting a balance of wide spectrum of different, and sometimes opposing, views positions and affiliations; these are presented in a form of own articles, interviews, or keynote statements. They reflect the richness and diversity of opinion that shaped the discourse among Iraqis at that time and, consequently, enriched the value of this book. Official views, expressed, through detailed interviews and statements, by senior government officials and decision makers reflect the political vision and economic aspiration of the dominant political parties, groups, religious/politicized individuals and different associations and gatherings of professionals, notably oil experts and professionals inside and outside the country.

This part includes also other articles written or interviews given by non-Iraqi oil professionals; they were included due to their relevance to Iraq upstream petroleum.

Part three comprises outside foreign and international standpoints and contributions to the debate about Iraq's petroleum and its prospect; a large number of items compiled from many and different external sources includes reports, studies, articles, and media reporting among others, most if not all, were written by non-Iraqis.

This part adds the third perspective of the book; how the outside world looked to Iraqi petroleum matters, what was their preoccupation, how did they understand or failed to understand, analyse, debate the issues, and foresee the implications. It is really amazing to revisit the then prevailed insights and wisdom!!

In this volume, Part Four exhibits noticeable additions and improvements, with production of many charts, tables, and introduction of trendlines and regression equations. Data and statistics are vital material evidence and essential for understanding and assessing progress or otherwise in different aspects in petroleum sector.

This part provides rather detailed data and analysis not only for 2012 but also covers previous years whenever possible. The followings are very brief highlights and identification of trends regarding the seven topics covered by this part four.

Oil Production and Cost Structure

Total oil production in 2012 increased by 24.8% from 2359 kbd in 2010; in number of barrels total production increased from 861 million to 1077 million between the two years. Much of the production and its increase had come from oilfields in the southern provinces (production increased by 27.6%), while production from northern and middle provinces increased by 17.1%.

That oil production increase, either in total Iraq or within the southern provinces, is explained by and attributed to first bid round effects. With the involvement of many IOCs, production from Rumaila, WQ1, Zubair and 3 Missan oilfields increase from Base-Line Production (BLP) of 1581 kbd in 2010, when these oilfields were contracted, to 2051 kbd at the fourth quarter of 2012, representing an increase of 29.7%.

Total cost recovery, both Capex and Opex, that are paid to related IOCs increased significantly from \$278million in 2010 to over \$6billion in 2012, leading to an accumulated \$10.225billion during the three years period.

Post-tax remuneration fees paid to IOCs for their service increased accordingly from around \$8.5million in 2010 to ca. \$610million in 2012, and totalling ca. \$777milion during 2010-2012.

During those three years, total cost recovery constituted 92.9% and remuneration fee constituted 7.6% of total dues paid to IOCs.

Oil Export, Revenues and Prices

During 2009:2012 period Iraq exported a total of 3.064 billion barrels with annual steady gradual increase from 2010 onwards; it increased by 27.3% in 2012 compared with 2009. Daily exports from 2010 to 2012 stand at 1.891mbd, 2.116mbd and 2.348mbd respectively. On average, Iraq oil export/oil production ratio (E/P) was 81.47%, with annual E/P ratio increasing gradually from 80.14% to 81.55% to 82.34% in the same years respectively.

Iraq collected a total of ca. \$271billion in oil export revenues during the four-year period 2009-2012; oil export revenues are function of export volume and oil price.

Despite a slight dip in export volume in 2010, all three variables were moving constantly upwards during the period due primarily to oil prices. This is manifested by the fact that oil prices increased by 40.4% in 2012 compared to 2010, while volume of oil export increased by 27.3% during same period.

Refining Sector: Capacities, Location and Production-Demand Misalignment

Iraq has in 2012 a total of 892kbd nameplate designed production capacity DPC, 74% of it located in three core complexes, while the remaining was divided among much smaller 10 refineries with DCP ranging between 10kbd to 30kbd each.

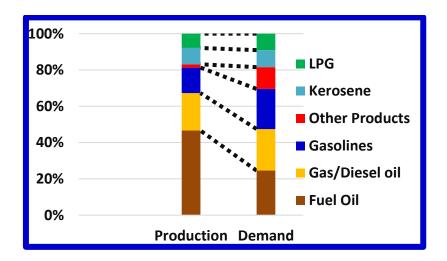
The most disadvantageous feature of such refining structure is the chronic misalignment between refineries configuration (of different petroleum products) and more dynamic domestic demand for various petroleum products. In other words, Iraqi refineries produce more of the heavier parts in the barrel, which has less domestic demand and thus any surpluses should be exported, while produce less of the lighter products, which are on increasing domestic demands and, thus, have to be met through imports of such products.

The results of my compilation of imports and exports of main petroleum products during the period 2009 to 2012 indicate Iraq imported 196.4 million barrel of petroleum products, while exporting only 16.3 million barrels.

Imports were heavily impacted by item "others", which has a vague term called "receipt", totalling 92.9 million barrels, Gasolines 72 mb, Gas/Diesel oil 19.8 mb, LPG 8.6 mb and Kerosene 3.2 mb.

Export of petroleum products was dominated by Fuel-oil, which stands at 15.2 mb.

Import export data provides another manifestation on how outdated Iraqi refining sector was and that contributes to the serious production-demand misalignment, as the following chart summarises and exhibits during 2009-2012 period for all petroleum products.



Associated Gas: Production and Flaring

Associated gas production and flaring continued unabated during the period from the first of January 2009 to end December 2012. Total produced associated gas exceeds 280 million barrels of oil equivalent-MBOE during the entire period, 71.4% of which was produced by South Oil Co, while 28.6% was produced by North and Midland Oil Companies-NOC. From that total more than 161MBOE was flared into the atmosphere, 80.7% and 19.3% of which was attributed to SOC and NOC respectively.

On total, my estimation shows that gas flaring costs Iraq more than \$14.5billion during the four years period 2009:2012. The annual trend was on a constant upwards from just over \$1.9billion in 2009 to ca. \$5.6billion in 2012.

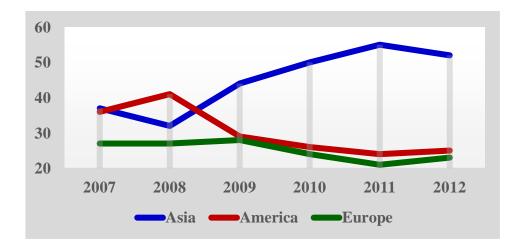
Oil Supplies to the Refining Sector

Crude oil supplied to all refineries in the country increased from 162.4 million barrels in 2009 to 214.3 million barrels in 2012. However, the year-on-year (YoY) increase indicates declining annual increase of 17.4%, 8.7% and 3.5% for years 2010, 2011 and 2012 respectively.

This pattern of annual refinery intake clearly indicates the limitation of the refining capacity and the technical configuration, which is characterized by the concentration of the heavy petroleum products, as shown earlier.

Iraqi Oil Exports Market Destinations

Iraqi oil has traditionally three major oil market destinations: the Americas, East Asia and Europe. All three markets are supplied from the southern export terminals in Basrah province on north Arabian Gulf, while oil from the north (Kirkuk blend) goes to Americas and European destinations only through the Turkish port of Ceyhan.



Asian markets offer, in 2012, higher oil prices for Iraqi oil comparable to the American and European markets; such price differentials mean also high netback per barrel for Iraq.

Overall, Asian markets scored higher netback in 2012 on all other markets through all Iraqi export outlets.

The largest netback from Asian markets was against Americas (mainly USA) netback for oil exported through southern export terminals, Basra province; the netback in favour of Asian markets increased from 1.06\$/b in 2010 to 1.38\$/b in 2011 and to significant jump of 6.05\$/b in 2012.

Development Fund for Iraq- DFI

A summary of DFI statements for years from 2009 to 2012 was provided showing the components of gross and net oil export revenues during these years. Net proceeds deposed in the DFI in these years were (in \$billion) 37; 48.8; 75.4 and 89.1 respectively.

A few notes of caution are due: first regarding websites availability; some websites do not exist anymore, some are changed to other identification, others are not accessible, for whatever reason, and some require subscription or fee for access. Second, writing Arabic names in English could be slightly different, e.g., Basra or Basrah; Myssan or Missan; ThiQar or Dhi Qar and so on. Third, some write Opec instead of OPEC.

IPSC is a fruition of almost two decades of constant follow-up, research, direct involvement, networking, and archiving. I encountered too many challenges, even life threatening, during the course of those years, but with patient and determination I managed to overcome them; this third volume of the book is the testimony for perseverance! It is an ongoing project.

I would like sincerely and wholeheartedly to thank Thamir A. Al-Ghadhban for his kind "Preface" of the book; his thoughts add much value to the book, highly appreciated Akhi Abu Khalid.

My thanks are due also to the International Energy Agency-IEA, the International Journal of Contemporary Iraqi Studies- IJCIS, Iraq Oil Report-IOR, Middle East Economic Survey-MEES, Iraq Business News- IBN, Iraq Oil Forum-IOF for the kind permission to re-publish their materials.

I pursued similar permission from Reuters, Energy Intelligence Group (PIW, IOD, OD, Energy Compass), Middle East Economic Digest-MEED, Upstream Daily Newsletter; some confirmed my request but, so far, I did not receive their final answer; I assumed they had no objection.

Ahmed Mousa Jiyad, Development Consultancy & Research, Norway.

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1 Methodology details are removed from this article, more on it and IPSC Project are provided through the following link: https://www.iraq-businessnews.com/2022/11/16/iraq-petroleum-sector-chronicle-research-and-publishing-project/