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MESSAGE OF PATRON



The evolving global security environment is though complex and challenging but it offers opportunities to those who position themselves correctly. Correct strategic positioning is invariably a result of conceptual clarity obtained through objective research and analysis. To this end, Armed Forces War College (AFWC) at the National Defence University endeavours to create knowledge through enhanced research, discussions and analysis in the field of national security.

This edition of OPINION e-journal comprises research work undertaken by the course members of National Security and War Course (NSWC) 2015. The selected articles are of general interest to a wide range of researchers, scholars and policy makers. We expect the journal to promote scholarly knowledge by inspiring discussions and information sharing with regards to comprehensive national security.

I would like to acknowledge the commitment and hard work of the entire team of OPINION on publication of its 5th edition. I hope the ideas shared would contribute towards creating awareness on the security matters and highlighting need to promote peace and stability.

Major General Muhammad Naeem Ashraf
Commandant, Armed Forces War College
National Defence University, Islamabad

CHIEF EDITOR'S CORNER

We feel great pleasure in presenting the 5th edition of our AFWC “*Opinion*” e-journal, the first publication of this year’s biannual issue. Deliberate efforts have been made by all concerned to maintain the high standard set forth by the University in bringing the well researched work by the panels of NSWC 2015 mainly comprising research work of individuals / panels on key issues.

For our new readers, OPINION journal is a publication of Pakistan’s premier institution National Defence University Islamabad. The magazine is a collection of selected researched work of the panels /individuals. The Journal is broadly divided into four sections i.e. Global / Regional issues, National Security, Military Strategy and Views of individual writers on contemporary issues.

I strongly believe that readers will feel a professional analytical approach and find new ideas in this edition as well. This edition will definitely be NDU's another leap for intellectual and professional development.

Midhat Shahzad
Chief Editor OPINION
AFWC Journal

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PART – I

Global / Regional Issues

- **Climate Change – Impact on Global Security**
- **Greater Middle East and Future Geo-Strategic Calculus**
- **Resources – conflict nexus; implications for Security calculus**

CLIMATE CHANGE - IMPACT ON PAKISTAN'S NATIONAL SECURITY

Mrs. Amna, Col Waseem and Lt Col Nadir

Abstract

Climate Change is more than just a warmer planet and changing weather patterns; it's more about long term impacts on socio-economic, political and environmental aspects besides security ramifications. The world community concerns over the global environmental change on social, ecological and security environment, "environmental change is now recognized as a key driver of national security." Accordingly, this paper analyses the impact of climate change on non-traditional security concerns like, water, food, energy, economy, and societal security besides implications for traditional security aspects like defence, terrorism and extremism. Historically, civilizations perished both due to climate shifts as well as socio-economic and politico-security causes. From scientific standpoint, regardless of our ability to accurately understand and predict the drivers of climate change, variation in the earth's climate will continue as it has throughout geological history. Already water stressed, Pakistan is fast becoming a water scarce country. This problem is compounded by Pakistan's inadequate water storage capacity to capture the water run-off from glacial melt and changing patterns of rain. Agriculture sector of Pakistan is adversely affected due to climate change. While energy and water security are issues of great security importance therefore for Pakistan, policymakers need to link the two issues for better future management. In order to address the challenges posed by climate change, there is a need to devise a three-pronged strategy through prevention, mitigation and adaptation. Unless addressed meaningfully, climate change issues will continue to have impact on our national security, hence, it is suggested that the study on climate change should be given its due place in the national security policy paradigm.

Introduction

Climate Change is much more than just a warmer planet and changing weather patterns; it's more about long term impact on socio-economic, political and environmental aspects besides having serious security ramifications. In 1971, Richard Falk identified environmental change as a security concern and introduced first law of ecological politics,¹ which says that if weather changes are faster, than there will be less time to adapt and greater will be the impact on the world. In the backdrop of concerns shown by the world community over the impacts of global environmental change on social and ecological systems, coupled with changed international security environment post-Cold War, "environmental change is now recognized as a key driver of national security".² It is in this framework that an attempt is being made to study the impact of climate change and analyze national security issues like, water, food, energy, economy, and societal security besides implications for defence.

Effects of Climate Change on Civilizations & Cultures

“Men argue. Nature acts.”

–*Voltaire*

Climate change is not a new phenomenon and has been happening throughout the history of Earth. The rise of civilizations and consequent development of culture seems partially³ dependent on the climate, because, “a stable climate ensures crops grow year after year, and a reliable source of food frees people to settle down and develop culture”.⁴ Consequently, many civilizations flourished and later perished due to climate shifts; notable examples are: the Mayans, the Sumerians, ancient West Asia, China, etc., which collapsed with climate change being one of the contributory factors. Before delving into history, it will be appropriate to define what climate change is? Is weather and climate different or synonymous? To answer these questions: “Weather reflects short-term conditions like sunshine, rain or snow, while climate is the average daily weather for an extended period i.e. from decades to millions of years;⁵ therefore the difference is temporal.

Oceans absorb “twice the sun’s radiation as atmosphere or land surface”;⁶ thus has great impact on land temperatures. Formations of separate continents “changed the flow of ocean currents and winds”,⁷ and thus shift in the climate. Volcanic dust blasts into the atmosphere causes temporary cooling,⁸ which can have negative impact on crops. If the tilt of the earth is more, than there will be more severe season, which may translate into warmer summers and cold winter. So if the tilt is less than there will be milder seasons. El-Nino⁹ is presence of comparatively high temperature, whereas, La-Nina¹⁰ is presence of comparatively lower temperature in eastern Pacific equatorial region, causing torrential or irregular rainfall in parts of Central and South America during respective phenomena. The impact of these phenomena is felt as far as Africa, Australia and Asia.

The earth’s climate is constantly changing, but there is a conjecture that recent warming maybe occurring beyond the established, natural cycles. A myriad of reasons have been proposed to explain the drivers of climate change, and the Heartland Institute an American think tank based in Chicago has identified seven major classifications of climate change theory,¹¹ which are; Anthropogenic Global Warming (AGW), this theory is based on the proposal that manmade greenhouse gases (GHG) such as water vapour, methane, nitrous oxide and primarily carbon dioxide (CO₂) are causing a rapid increase in world temperatures.¹² It is universally accepted that sunlight warms the earth and much of the energy is reflected back to space. AGW theory contends that trapped environmental GHG redirect some of the reflected energy back to the earth’s surface inducing a rise in global temperature.

The Bio-thermostat theory contends that increases in atmospheric CO₂ are naturally regulated by biological and chemical negative feedback systems.¹³ In this way fluctuations in climate are controlled by a natural thermostat system. The proposed major driver for this is the carbon cycle. Increase in CO₂ and temperature provide favourable conditions for photosynthesis resulting in an increase in plant biomass. This increased vegetation captures and stores CO₂ resulting in a stabilisation of atmospheric levels and climate. The theory of regulation of global temperature by tropical cloud formation is based on observation rather than scientific modelling. After observing cloud changes during past climate fluctuations,

a number of US and NASA¹⁴ scientists have proposed that clouds act to regulate the tropical Sea Surface Temperature (SST) between 28 and 30°C.¹⁵ Heating of the water surface produces warm, moist air stimulating cloud formation and the low level clouds shield the sea surface from further heating.

Human activity other than GHG may also drive climate change.¹⁶ Human demography has seen a population shift from rural areas to urban cities. Urbanisation has created “Heat Islands” due to replacing vegetation with concrete buildings and asphalt that absorb and reflect solar energy and an increase in heat producing mechanical equipment and cars. Deforestation associated with urbanisation reduces arable land for carbon sequestration and therefore limits the carbon sequestration process associated with bio-thermostatic regulation. The sea surface is heated in the tropics and ocean currents distribute this absorbed heat to Polar Regions. Warm, shallow currents cool upon reaching higher latitudes and after releasing heat energy, subside into deep, colder currents before welling up in lower latitudes. This continual process is known as ventilation and the global currents are depicted at Figure 1. The cycle occurs every one to two thousand years.



Figure 1 – Ocean Ventilation Currents¹⁷

The earth’s orbit shape is also constantly changing from nearly circular to an exaggerated elliptical. This cycle takes about 1000 years to complete and the differing orbital paths cause variations in the macroclimate of the earth. Periods of maximum tilt combined with maximum elliptical orbits result in long cooling periods, or ice ages. Warming periods result from the opposite circumstances.

The solar variation theory of climate change contends that energy from the sun is a major contributor to atmospheric temperature and that variations in the solar cycle drive climate change.¹⁸ Temperature is not simply controlled by exposure to solar radiation, but solar activity has more complex effects such as solar radiation influencing the formation for condensation nuclei for cloud formation. Some scientists are proposing that although the world’s average temperature increased during the late 20th Century, it has now stabilised over the last 18 years. Figure 2 depicts a neutral trend that can be derived from temperature data collected at the three terrestrial and two satellite collection systems used to calculate global monthly temperatures.

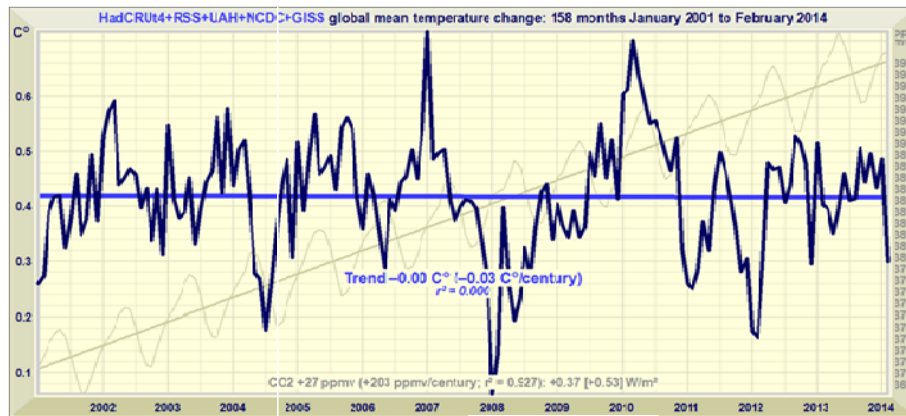


Figure 2 – Global Mean Temperature Change 2001 – 2014¹⁹

Impact and Implications

Despite lack of consensus on the drivers of climate change at global level, climate change is part of top ten challenges world faces today. The “three major global surface temperature reconstructions show that Earth is being warmed since 1880”.²⁰ In the last one hundred years the temperature has gone up by 0.75° C, and it is predicted to keep going up if the humans continue to dump fossil fuel into the atmosphere at the rate of 2.5 ppm (parts per million) per year. Extreme events are more intense, frequent and longer lasting. European heat wave of 2003 is an example which led to 80,000 dead.²¹ Intense cyclones, hurricanes, prolonged wet and dry spells with floods and drought are the likely fallouts of warming. Globally, 95 % of the Glaciers are shrinking to include glaciers in Alps, Himalayas, Andes, Rockies, Alaska and Africa. In the 20th century, “global average sea level rose at a rate of about 1.7 mm/year”.²² Now, it is rising at 3 mm per year, which is almost double from last century.²³ The main contributing areas are: oceans warming and melting of ice over land, adding water to the oceans. Oceans grew warmer by 0.59° C in the 20th Century²⁴ and Jul 2009 was the warmest year on record. Higher sea level and warmer ocean temperatures alter habitat and impact weather worldwide. Introduction of CO₂ into the seas is raising the acidity level, thereby “affecting the life cycles of many marine organisms, particularly those at the lower end of the food chain”.²⁵

Climate change will affect agriculture and global food supply.²⁶ Extreme events will reduce crop yields, fisheries and livestock productivity. Increases in extreme events will diminish water quality, cause algal bloom and increase bacteria. Additionally, areas with frequent droughts will have less water available for crops and livestock, resulting in increased competition for water resources, causing global, regional and national security concerns. Warmer average temperatures can cause more people to fall sick due to heat-related infections:²⁷ however, the impact will vary on the health sector capabilities of that community and the risk associated to “age, gender, and economic status of individuals affected.”²⁸ Therefore, poor countries and communities can be at higher risks especially once seen in the context of their adaptive capability. Fifteen Asian megacities are “sensitive to sea level rise and increased coastal storm surges”.²⁹ Individuals and groups respond to climate change differently, “such as elderly, infirm, children, native and low-income populations”.³⁰ Extreme events as a result of Climate change may affect the migration of people

within and between countries around the world, and their frequency is likely to increase.³¹

Africa is one of the most vulnerable continents “due to multiple stresses and low adaptive capacity”.³² By 2050, it is projected that 350 - 600 million people would experience enhanced water shortages. Moreover, “towards the end of the 21st century, projected sea level rise will affect low-lying coastal cities”.³³ Glaciers in Asia are melting faster, increasing the risks of flooding and avalanches. Coastal areas are threatened due to sea level rise and increased flooding from the sea and from rivers. Sickness and deaths due to disease are likely to increase owing to projected changes in the “hydrological cycle”.³⁴ India and China considered being among the leading CO₂ emitters are enhancing the risks related to climate change on other countries as well. In Europe, higher temperatures and drought affect the water availability, hydropower production and tourism, whereas, colder regions face mixed effects with some benefits like less heating requirements, better crop yields, and healthy forests. In Northern America, the warming of western mountainous regions is likely to decrease snow accumulation with enhanced winter flooding, resulting in reduced summer flows aggravating competition over water resources. Moreover, reduction of sea ice and permafrost would have negative impacts on infrastructure and winter activities “such as ice fishing and transportation”;³⁵ however, more economical northern sea routes can be available for shipping industry.

Climate Change and Pakistan’s National Security Implications

Pakistan is amongst the countries which are highly vulnerable to the adverse impact of climate change despite the fact that its global GHG emissions contribution is “only 0.8%.”³⁶ Major impact of climate change on Pakistan are; Pakistan has experienced an average rise of 0.57 °C³⁷ in temperature during last century and it is projected to increase further by 4.4 °C by the end of 21st century. During last century, the precipitation change over Pakistan has shown an increase of 25%³⁸ with variations in the timings and quantity of rains. As per 2007 IPCC report, Glaciers in the Himalayas are receding and it is very likely that they will decrease significantly by the year 2050.³⁹ The mean sea level has risen to an estimated 19 cm⁴⁰ during last century. The Arabian Sea level has been rising approximately at 1.2 mm/year.⁴¹ Some of the incidents in recent past include glacial dam outburst Lake at Attabad (2010), Floods (2010), two super cyclones namely Gonu and Yemyin the Arabian Sea in June 2007, which hit Makran coast and adjoining countries.

Climate change poses serious challenges to National security of Pakistan. It is projected that next two to three decades, Pakistan challenges of water, food, energy and societal security may get compounded. Due to increasing population, Pakistan already water stressed country is fast becoming a water scarce country. The per capita availability of river water has been reduced from 5650 m³ per person per year to 1100 m³ in 2010⁴² and is projected to be around 885 in the year 2020. Pakistan’s water storage capacity of 18.37 MAF has been reduced to 14.28⁴³ due to silting, reservoirs which is still continuing. The present reservoir capacity is only 9 percent of the average annual rivers flow which is very low as compared to world average of 40 %. Worse still, the water storage capacity per citizen in Pakistan is extremely low i.e only 150 m³.

Pakistan is already facing acute shortage of electricity, causing shut down of industry. The electricity produced through hydel resources accounts for 30% of the total generation, and due to receding glaciers, water in the rivers will reduce significantly causing a serious imbalance in the future energy mix. If unaddressed, growing energy requirements of the country will mostly remain unfulfilled. Also, there is likely to be increased energy demand for pumping ground water to compensate gap in agriculture/domestic demand & supply along with enhanced energy demand for cooling due to increase in temperature. Moreover, extreme climatic events will pose threat to power transmission infrastructure as well.

Climate change result into variety of natural disasters, reduced yield and energy production. These all contribute to economic meltdown. According to the Pakistan Strategic Environment Assessment Report by World Bank, the annual cost of environmental degradation in Pakistan has been estimated at 6 % of GDP.⁴⁴ As per study done on Flood Assessment damage⁴⁵, 2010 floods alone cost economy up to \$ 10 billion.

In the aftermath of 2010 floods, “over 37 million medical consultations were reported within one year of the floods”.⁴⁶ Most of the consultations were for respiratory infection, skin diseases, diarrhea and malaria. Such extreme climate events usually lead to serious health catastrophes which may be beyond the capacity of available national health care resources. Droughts, rising sea level and melting glaciers affect the populace and force them to migrate to other regions. The growing pressures over cities because of rural to urban migrations, and inter-provincial migrations of people could itself weaken the internal cohesion and undermine security. Higher un-employment rate, rising poverty and forced migrations due to extreme weather events will contribute to adverse law and order situation. These may lead to creation of condition favorable to giving rise to extremism and terrorism.

The Way Forward

In order to suggest a way forward, it would be prudent to summarize the prior discussion. Historically, civilizations and their cultures perished both due to natural causes like drought, floods or extreme cold, as well as socio-economic reasons like lack of interest in food security, or utter apathy of humans towards natural environment. Regardless of our ability to accurately understand and predict the drivers of climate change, variations in the earth’s climate will continue as it has throughout the geological history resulting in change in physical environment. Climate change is a global phenomenon irrespective of the source of GHG emissions, the world as whole will have to bear the effects, and need to arrive at a global consensus.

Already water stressed, Pakistan is fast becoming a water scarce country. This problem is compounded by Pakistan limited water storage capacity to capture the water run-off from glacial melt and changing patterns of rain, warranting immediate construction of water storage facilities. With reduction in availability of fresh water and receding glaciers due to climate change, there is a likelihood of water becoming a cause of conflict. Agriculture sector of Pakistan is adversely affected due to climate change. Besides aggravating food security issues, this will also cause enormous loss to national economy in the long run. While energy and water security are current

issues for Pakistan, their implications for national security will be significantly magnified by the impacts of climate change.

Policy Guidelines

Clearly policy makers need to recognise the importance of environmental protection as a major premise of national security. In order to address the challenges posed by climate change and governance shortfalls, there is a need to devise a three-pronged strategy through **prevention**, **mitigation** and **adaptation** in following areas:-

There is an urgent need to increase water storage capacity from current level of 9% to 40% of available water. This increase will provide more water for irrigation, power generation and to mitigate damage from flash floods. Beside this, there is a need to adopt water conservation technologies (Drip and sprinklers technologies) and to improve underground water table by embarking upon recharging water aquifers (Wetlands, rain water harvesting, tree plantation). Also, inter-provincial distribution of water should be done according to crop-sowing timings.

There is a need to develop national level Management Information System about crop, soil and climate to identify ideal cropping pattern for each agro zone. There is a need to focus on energy efficient farm mechanization (solar tube wells, drip irrigation, sprinklers), besides establishing Climate Change units to carryout farm-related research in order to figure out strategies for projected impacts of climate change on farming. Media should be used for effective communication of climatic predictions as well as weather forecasting and corresponding advice to the farming community. Government should also develop a proper risk management system including crop insurance to safeguard against crop failures due to extreme events (floods, droughts etc.). In the field of livestock, develop and introduce better breeds for higher productivity of milk and meat and are less prone to heat stress and more drought tolerant.

Reforestation should be embarked upon at priority and adopt new forest management and planning options in line with research on climate change. Also consider expanding protected areas in the country, which should also include conservation of wildlife. Also, prevent cutting of trees as fuel.

As suggested by UNFCCC (Article 4.1b), Pakistan needs to shift current energy policy mix from Coal, Oil, Gas which causes environmental degradation) towards renewable energy option. Give preference to generate and import of natural gas, Liquefied Natural Gas (LNG) and Liquefied Petroleum Gas (LPG) over import of oil and coal. In the public domain, improve energy efficiency by introducing standardized building and construction codes through legislation and by giving incentives for remodelling etc. For institutional improvement, ensure quality management of energy production and supply, by reducing line losses both during transmission and distribution.

Socio-Economic Dimension

To cope with the challenges of disease outbreaks, systematic monitoring and forecasting systems are required. There is also a need to sensitize the public and

educate and train health personnel about climate change related health issues. Furthermore, educate masses about preventive measures besides ensuring availability of required vaccines, quality medicines and clean drinking water to the general public during extreme events like floods and droughts.

There is a need to ensure implementation of laws regarding prohibition of human settlements on river courses, besides undertaking hazard mapping and zoning of areas before construction. In the long term, update town planning design principles for lesser carbon trails. There is a need to monitor and institutionalize rural urban migration, which is posing serious threats in already over-burdened cities and towns.

In order to improve upon the social indicators and also be in league with the global community on “Convention on Biological Diversity”, the state needs to fulfil its obligations to provide people the basics like food, fresh air, water, shelter, and a clean and healthy environment to live. On the other hand, climate change poses serious threats to biodiversity through land degradation processes of water logging, salination, and wind and water erosion. Therefore, there is a need to set National Biodiversity Indicators and allocate sufficient budgetary resources to execute Biodiversity Action Plan (BAP).

There is need to formulate “Corporate Social Responsibility” (CSR) guidelines and encourage corporate sector to create CSR-fund to cover carbon emission reductions efforts in industrial sector. Also, encourage industrial sector to have periodical “Energy Efficiency Audit to contribute in the overall saving of energy. There has to be an institutional response with regard to developing environment friendly transport system. In this regard, government should support the public-private transport sector partnership. Also, focus on upgrading and expanding the railway network in the country as the advantages of railway over road travel in terms of carbon emissions are well recognized.

There is need to establish the National Climate Change Commission for coordinating all climate change activities at national and international levels. There is an urgent need to improve the inter-ministerial and inter-departmental decision making and co-ordination mechanism on climate change issues both at provincial and federal levels especially to strengthen disaster risk managements system. Also, provide training and support, at national and international levels, to the concerned officials and experts of line ministries and departments and strengthen national climate change science related institutions, in particular the Global Change Impact Studies Centre (GCISC). To offset the impact of extremist outfits in relief and rehabilitation post disaster, disaster management system should be strengthened by increasing its capacity through new enrolment, buying new equipment, and continuous training of these personnel.

The effects of climate change have linkages between domestic and regional / global efforts. Therefore, the initiative should drive from top, so that the way forward becomes binding on the countries and they are unable to rescind unilaterally. Irrespective of the controversy with regard to future projections, the effects of climate change should figure far above in priority of challenges, the world is facing today. At the regional levels, the needs to support the establishment of SAARC Climate Change Research Centre in close proximity to the Global Change Impact

Study Centre (GCISC). In the backdrop of water becoming a tool of coercion and a likely cause of military conflict between regional countries, a pro-active diplomatic approach will be required to sensitize international community about the severity of issue.

Conclusion

The drivers of climate change may be open to debate, but what is certain is that variations in the earth's climate will continue as it has throughout geological history. These changes will have real and significant impact on the physical environment with major implications for national security that cannot be ignored. Unless addressed meaningfully, climate change issues having multifaceted implications on economy, environment, social, but most importantly the overall security paradigm, will continue to have adverse impact on our national security.

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GREATER MIDDLE EAST (GME) AND FUTURE GEO-STRATEGIC CALCLUS

Brig Rizwan, Lt Col Wajid and Mr. Ayaz

Abstract

Post 9/11 US invasion of Iraq and later Arab Spring, has significantly changed the security milieu of the region. The disappearance of relatively strong Iraq has disturbed the regional balance of power in the Middle East and currently the latent sectarian rivalries are manifesting into violent separatist movements. The surprising rise of brutal self-proclaimed Islamic State has further complicated the situation and poses serious challenges to regional and global powers to find solution to the ongoing security situation. At the same time Arab Spring offered an opportunity to further concept of democratization of Middle East. US deliberately sacrificed pursuance of their valued ideal of democratization in Egypt, as they saw rise of radical political Islam as a nemesis; interests preceded over values. Chaos in Libya, Yemen, Syria, Iraq and dreadful IS phenomenon are threatening to divide the region on ethno-sectarian lines. Yinon Plan or broader concept of blood borders is being unfolded; only time will reveal. This uncertainty demands that Pakistan must maintain constant vigil so as to formulate effective and timely policies. Post Arab Spring flux has added to dangerously evolving chaos in the region with numerous policy challenges for Pakistan. For Pakistan, Middle East has always been an important region; today it offers both complex challenges as well as unique opportunities which need to be intelligently tackled so as to further our national interests.

Introduction

The present day Middle East as a geographically defined entity came into existence after World War II and has seen various ups and down throughout the recent history. Events post 9/11 US invasion of Iraq and later Arab Spring, have significantly changed the security milieu of the region. The disappearance of strong Iraq disturbed the regional balance of power in the Middle East, consequently the sectarian rivalries are transforming into violent separatist movements with ideological basis. The surprising rise of brutal self-proclaimed Islamic State has further complicated the situation and poses serious security challenges to regional and global environment. The continuing chaos in the region has a strong possibility to spread beyond traditional Middle East and affect Pakistan, often shown as integral part in some modern geographical imaginations of the region commonly referred to as Greater, Broader or New Middle East. Middle East is very important region for Pakistan; prime reasons are political, economic, social and religious. Politically, it is important because of its geographic proximity and our special relations with many of the states. UAE is one of our major export destinations and a source of large Foreign Direct Investment and remittances. While KSA has always remained an important ally and source of financial assistance during crises. Similarly Pakistan, by and large enjoys very cordial relations with all other countries of the region. Pakistan's greater bondage with these countries predominately is through religious affiliation.

In 1902, the term Middle East became common, when Alfred Mahan, an American naval historian, used it for the region between the Suez and Singapore.¹ During WW I, UK and France supported Arabs against the Ottomans and secretly signed Sykes - Picot Treaty in 1916 to outline the share of Arab lands. This actually defined the contours of modern day Middle East. Decline of British Empire made the boundaries of the region even more uncertain, while the modern day Middle East became strategically important due to discovery of energy resources. The exact countries thought to be part of Middle East are often debated.² There are different maps with varying extent, some even showing Pakistan, Afghanistan and certain central Asian states as part of Middle East. In recent decades, there has been a growing trend in the relationship between imagined geographies and the foreign and security policies of the states. According to American Historian, John Gaddis; Geopolitical imaginations are important as they provide the ground for publically justifying a state's foreign policy stance, while actually serving its national interests.³ In historical context, we see some important theories which profess the idea of redefining the boundaries in Middle East and bear some relevance to ongoing crisis and concept of geopolitical imaginations like GME.

In 1982 Oded Yinon an Israeli journalist working for Israeli Foreign Ministry professed the theory of greater Israel, consisting of area extending from Nile Valley to Euphrates. He suggested that Israel in order to survive must become an imperial power, must reconfigure its geopolitical environment through the balkanization of the surrounding Arab States into smaller and weaker states. Essential the theme implied that Muslims' infighting / instability for sectarian or other reasons is in effect Israel's insurance policy.

Post USSR dismemberment, Islamic fundamentalism and terrorism paved the way for new geopolitical code - **War on Terrorism**. With intervention in Iraq, Bush administration launched an ambitious policy to forge new democratic Middle East and termed the project as "Greater Middle East Initiative". The geography described as part of the GME project comprised of **Arab League countries, Israel, Iran, Turkey, Afghanistan and Pakistan**. Due to criticism from Arab world and reservations from EU, the term Broader Middle East Initiative was accepted with inclusion of North African Countries. **Blood Borders**, a very intriguing balkanized map defining New Middle East was constructed by a Colonel (retired) Ralph Peters which was published in the US Armed Forces Journal in Jun 2006 under the article **Blood Borders - the map includes Afghanistan, Pakistan, Armenia and Azerbaijan as part of New Middle East**.⁴ Ralph Peters does admit that his propositions are "draconian" in nature, but he insists that they are necessary pains for the people of the Middle East.

Since the birth of Israel, US have committed itself to its security and prosperity and is likely to continue in future for domestic, political and economic expediencies. Being rich in oil, the Middle East has been high on the priority list of regions. Securing sea-lanes for oil supply and keeping the price of oil stable in the international market is also a key US concern. However, with the discovery of huge reserves of shale oil (around 42.2 billion barrels) and gas (around 328 trillion cf) US dependency on the Middle Eastern oil has reduced. Another key US strategic interest is to prevent a regional hegemon. WMD proliferation and terrorism are also a major US concern. After the rise of IS, Middle East has regained US focus in the region.

Russian policy is driven by; fear of US plan to restructure the world to spread global domination and chaos in the Muslim states on its southern border which may engulf the northern Caucasus. Russia's concern in the outcome of the Syrian civil war stems from two critical interests as Sunni Jihadis who dominate the rebel opposition and Naval supply station at Tartus which supports the expansion of Russia's naval presence in the Eastern Mediterranean. Russia continues to support Bashar al-Assad and was key to Syria agreeing to give up chemical weapons. It effectively blocked anti-Assad resolutions at the UN Security Council. It also continues to supply Syria with arms.

The EU has been a reluctant player in the ME crisis. The member countries differ on a number of issues such as Israel's highhandedness and engagement with Iran. It has allowed the US to take a lead role in dealing with the crises in Syria, Iraq and Iran. Britain has been a trusted, historic, ally of the US in the region and supports most US initiatives. In May, 2013, the UK, along with France, successfully lobbied for the EU's arms embargo to be lifted, so as to allow further supplies to Syrian rebels. With Iran, it shares the interest of stopping IS. Britain has decided to reopen its embassy in Tehran after the mob attack four years ago.

Saudi Arabia has been a key player in the region due to its wealth and being home to **Haramain**. It is vying for regional supremacy with Iran with whom, its relations have been tense due to; the potential development of a nuclear weapon and Iran's alleged interference in other states of the region particularly those with significant Shiite population. Saudi Arabia has also championed the Palestinians cause. It did not approve of the Arab Spring and extended outright support to Ben Ali of Tunisia, Hosni Mubarak and Ali Abdullah Saleh of Yemen during the revolution. However, it acquiesced with Western Powers in the ouster of Qaddafi with which it had serious differences. Saudi Arabia-Syria relations have been tense for years. Saudi Arabia has been particularly active in pushing for action against Mr. Assad, and called for "all legal means possible" to be used to stop the bloodshed. In Iraq, Saudi Arabia sees Iran's influence with disapproval. Iran on its part accuses Saudi Arabia for funding Salafi Sunni factions in Iraq including the IS.

Iran sees itself as one of the most important member and leader of the Islamic world. Its role and relations with the west in toppling Saddam and Taliban in Afghanistan in 2001 has greater convergence of interests. With the West, its policies in the region are marked by cooperation in Iraq and difference over Syria. Since mid-1990s, Iran is pursuing its nuclear programme. Arabs share Western perceptions that Iran's programme will threaten peace in the region. It is alleged of supporting pro-Iran Shiite communities in the world especially in the Middle East, and has supported politically and materially Hamas, Hezbollah and Kurds and has strategic alliance with Syria. It is coordinating its resistance to IS' advance while the US carries out air strikes.

In the recent past Turkey has also been re-asserting itself for a leadership role in the region. Its relations with Arab states are tense due to its role in Egypt. Its strong pro-Palestine and anti-Israel stance is also seen as policy shift in its policy. It is deepening its relations with Iran sensing its growing understanding with US over checking the rise of fanatic forces in the region.

Israel has spurned all proposals for a peaceful settlement of the Middle East Crisis. It regards President Assad as an enemy, but has refrained from publicly backing military action against him. It is against a nuclear Iran. For India, the ME is of high strategic importance. It enjoys good relations with all the states and has strategic agreements with Iran, Israel and some GCC countries. Its trade with GCC exceeds \$100 billion for non-oil products alone. It has 6 million-strong workforce in the region, which remits over \$40 billion back home. India's 61% oil comes from the ME. It is pursuing for observer status at the OIC after late King Abdullah offered it in 2006 during his visit of India.

Conflict Dimensions of the Region

Iran and Saudi Arabia were engaged in a strategic rivalry for influence in the region long before the Arab Spring. Both maintain tangent views on regional order and aspire for the leadership of the Islamic world. The major causes of their not so friendly relations could be summarized as; collapse of Saddam Hussain which brought Iraq into the Iranian sphere of influence. Possibility of US-Iran rapprochement which will impinge upon the privileged position of the Kingdom with US, sectarian and ethnic differences and divergent political ideologies. Different agendas of both the countries at OPEC and positions taken in regional conflicts, particularly during the Arab Spring. Perception that Iran is meddling in the affairs of the Arab World and promoting Shia Crescent, whereas KSA being seen by promoting Sunni sect.

While remaining on same side of the strategic equation, some minor tensions are also simmering in the GCC states; the apparent one seems to be between Qatar and KSA. Qatar has recently tried to take the lead in the regional conflict resolution and management, thus challenging the leadership of KSA. Both Qatar and KSA have different views about role of Muslim Brotherhood particularly in Egypt.

Struggles between Sunni and Shiite forces have fed a Syrian civil war that threatens to transform the map of the Middle East and fuelling violence that is fracturing Iraq. This rivalry is likely to shape the political balance between Sunnis and Shiite and the future of the region, especially in Syria and Iraq.⁵ Many experts express concern that Islam's divide will lead to increasing violence and a growing threat to international peace and security. It is important to add that sectarian dimension of conflict in ME is a consequence, caused by regional and international influence to maintain their interests.

The rise of the IS and its proclamation of a so-called caliphate indicate a new and more brutal face of "terror in the name of religion". The network has drawn a number of young Muslim fighters from the Western countries into its ranks. In its advance toward Baghdad, IS has already blurred national boundaries between Iraq and Syria, captured significant arms and weapons caches, caused a spike in global oil prices and increased the sectarian conflict across the Arab world.

Most of the separatism is attributable to artificiality of Sykes-Picot boundaries. Due to eruption of chaos and instability, the geography of the region as well as ethnic and sectarian lines has come into play, which is resulting in separatist movements. In Syria, the Aleppo region is closer to Iraqi Mosul than to Damascus. More so, sectarian divide within Syria may even take a sharper division with greater

polarization which may sow the seeds for break-up of the country; so is Iraq which clearly seems divided in three regions of Sunni Iraq, Shiite Iraq and Kurdistan. But, Kurdistan affects Turkey as well as parts of Iran and Syria. In Libya, we also witness the revival of the historic regions of Tripolitania and Cyrenaica.

Sectarian and ethnic conflicts have been fueled by regional and extra-regional players to spark militancy resulting into a situation that looks more like a ***‘war of all against all’***. However, this seems to consequence instead of a cause. Importantly, most of the militancy has been directed inwards against the citizens. The eventual outflow of these militants with Western passports is viewed as a potential “Terrorist Diaspora” that could eclipse the global terror networks that emerged after the Afghan war against the Soviet Union in the 1980s.

The continuous ongoing systematic brutalities committed by Israel against unarmed Palestinians marks the conflict in Gaza and West Bank as a flash point in ME. So far, around 2300 Palestinians have embraced Shahadat. Such brutalities will further radicalize the Arab society, increase the tensions and diminish the prospects of any early solution.

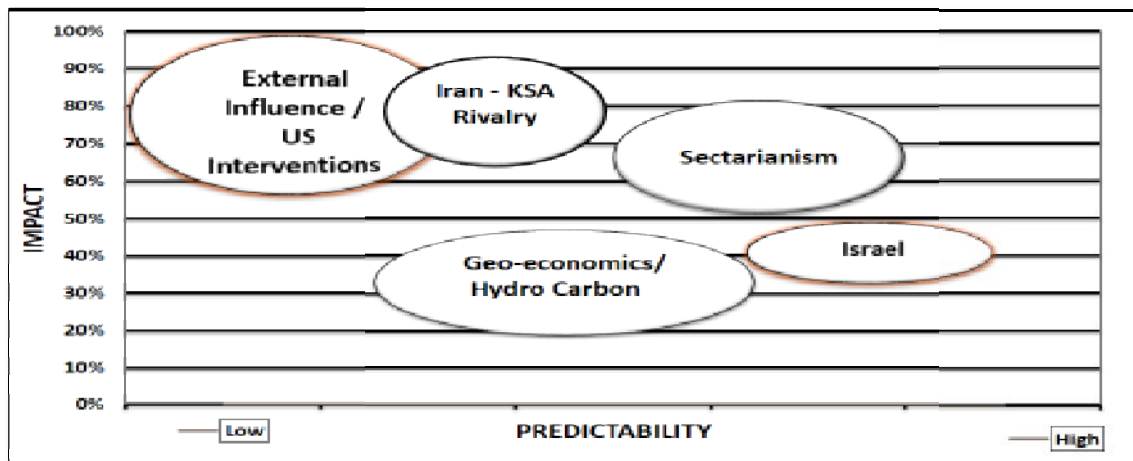
In none of the Spring States, a successful transition to a democratic dispensation has been achieved. Tragically, what promised to be the dawn of a new era of individual freedoms, now become a nightmare across the region, millions of suffering Arabs are yearning for a return to the stability and relative wealth offered by the likes of Muammar Qaddafi and Saddam Hussain. Three years after the Arab Spring, elections are in process across the Middle East, but an embedded culture of democracy remains a distant dream.⁶ All the original Spring States have now become worst tyrannies or failed states after the so-called Spring less Tunisia. The phenomenon was just another name for twitter-driven change of old guards who had lost their utility for their masters. The uprisings of the Arab Spring have so far produced anarchy in Libya and a civil war in Syria.⁷

Emerging Trends and Projected Scenarios

Important trends which have emerged so far in the region are as; deepening sectarian and ethnic cleavages with no end in sight. Sudden rise self-proclaimed IS as one of the richest, highly organized and effective 'Militant Organization', getting funding and attracting fighters from all over the world including West, increased sense of vulnerability amongst the ruling elite will inevitably translate into enhanced spending on military hardware.⁸ Without a dramatic transformation in geo-political climate, regional alliances will continue to be formed on sectarian lines, chronic political injustice and socio-economic deprivation resulting in rise of militancy with foreign support and sectarianism as catalyst. Despite the failure of the recent Arab Spring, educated Arab youth will probably rise once again and the region is likely to go through another cycle of political unrest⁹, multitude of human crises and sufferings; refugees and IDPs. This may put Gulf States will and capacity to serious tests. Iran emerging as stable regional player vis-à-vis KSA and other GCC countries with changed political focus and regional realities. Historic rivalry of opposing camps KSA vs Iran continuously being played out and Iraq and Syria are likely to remain a contested frontier region in near future¹⁰ and the external players as drivers have successfully influenced internal voices in the region. Security of energy supplies and stability of oil prices - a point of convergence for all the international players in the

region. Fundamental realignment of the geopolitical chessboard, with US led west increasingly improving relations with Tehran. External influence/US interventions, Iran - KSA rivalry, Sectarianism, Geo-economics/Hydro Carbon reserves and Israel – a wild card are some major drivers while disenchanted youth, Globalization and social media, Petro dollars, Centrifugal tendencies - Separatism and Irredentism and Questionable legitimacy of political dispensation can be listed as key enablers for changing scenarios.

All major drivers have been reflected on the ‘impact – predictability’ graph which indicates that external influence and Iran-KSA rivalry are the two drivers with maximum potential to influence the situation in ME and are highly unpredictable.



Four different scenarios are as; Managed Chaos, Balkanization, Political Détente and Diverse Mix.

Current chaos and volatile situation in the ME continues but within manageable limits; Present political map of the ME may survive all the turmoil around regional, tribal, ethnic, and sectarian issues. The failing states of Iraq, Syria and Libya may continue in the same state of internal conflict and emerge on the other end as largely intact. Monarchies in the Gulf take the Jordanian route and liberalize their rule through greater participation. The Iran-KSA regional rivalry, in this scenario, may continue but remain within manageable limits. GCC forms a confederation of its own and an effective Peninsular Shield emerges.¹¹ Sectarian tensions increase but the self-proclaimed IS’ victory is short lived. Israel and the Palestinian Authority fail to reach a comprehensive peace and security agreement. In this scenario, economic conditions are challenging but not desperate. The United States puts pressure on the Saudis to begin to mend ties with Iran in view of Iranian efforts against the IS. The international recruitment, radicalization and funding issues will keep challenging the security apparatus in the West. The scenario hinges on global powers finding an abiding interest in survival of the region’s current political map.

The current state of violence and war of all against all may actually yield to a transformed map of the region with several new political entities carved out of the present states. Under this scenario, major projections are; the entire region may be engulfed by intense conflict and another wave of violent revolutions. In the short to medium term, most likely candidates for further fragmentation are Iraq and Libya.

In the long term, Yemen and Syria may face similar situation. Cold war between KSA and Iran transforms into more active proxies in each other's mainland. Israel may be able to expand geographically and address its immediate security concerns. If and when the borders are drawn up along sectarian and ethnic lines, frequent inter and intra-state wars may be a feature of the region, like Africa. United States remains less engaged in the region. A difficult global economic outlook helps to accelerate the growing fragmentation and conflict. The growing sectarianism makes it impossible for Iran and P5+1 to reach agreement and the Saudis and others accused Iran of supporting the growing Shiite rebellion in Gulf countries. Except for the Kurds, everyone would lose as sectarian tensions grow in a major conflict with the battleground extending across the complete central Levant region.

Successful Iranian Nuclear deal and new political détente emerges; Iran and the P5+1 clinch a more far reaching deal than anticipated.¹² Iran reduces its fool print interference in the sectarian conflicts in Syria. Regional cold war between Iran, Saudi Arabia and Israel begins to thaw. Whereas conflict has fed on itself, a deal with Iran prompts a ceasefire agreement in Syria resulting into peace and prosperity of the region. Relations between other regional powers as Turkey, Israel and Egypt also see upward improvement thereby helping in moving towards resolution of Palestinian issue. The new political détente lays the groundwork for a new phase of economic development throughout the region. The region adopts sweeping reforms to train its huge domestic population with skills that can add value to the economy.

A diverse mix of partial fragmentation, manageable chaos and political reforms; the region is likely to witness diverse range of activities ranging from partial fragmentation at one place to manageable chaos at other and to a meaningful reform process with positive outcomes at remaining places. Terrorist entities like Islamic State successfully manage to divide Iraq along sectarian cum ethnic lines with a continuous spate of violence in Syria. Monarchies in the Gulf may take a multi-faceted approach using both hard and soft power and re-distribute oil wealth amongst the disenchanting masses. The Iran-KSA regional rivalry, in this scenario, will continue to fester but shall not cross the tipping point. Since the scenario anticipates partial fragmentation, therefore inherent element of instability will persist.

Summing up – Scenarios

Considering the overall trends emerging in the region vis-à-vis analysis of all scenarios, the first scenario i.e. Managed Chaos is the most likely because international community will not let the chaos to escalate due to economic and security compulsions; will therefore intervene and manage the spread of the conflict. Balkanization is the most dangerous scenario, considering its impact and far reaching ramifications for the region. Owing to its horrendous consequences, it is not much probable scenario because key regional countries like KSA, Turkey and Iran will apply security and diplomatic safeguards to check the chaos before it threatens their integrity. Meaningful turnaround as projected in Political Détente Scenario is not likely in short term due to structural nature of economic problems. However, we may witness the beginning of economic recovery towards the end of the forecasting period - so long as the needed reforms are initiated. Clinching a major agreement with Iran could be an important confidence-building catalyst for reorienting the ME on a more positive path.

Way Forward For Pakistan

Pakistan; even considered by some key players as integral part of Greater Middle East is deeply influenced by events in the ME. There is a need to review, revise and relook into our outlook towards the region. The theories of 'Yinon Plan' and Blood Borders essentially hinge on spread of ethno-sectarian tensions. Playing faith games, West may eventually be on the course of collision with Islam – possibly theory of 'Clash of Civilization' in operation. The ethno-sectarian crisis in Middle East can also affect us and therefore is our prime internal security challenge. Lal Masjid and similar radical setups do have sentimental attachment with radical groups operating in Syria and Iraq. Naming of a training camp in Iraq after Ghazi Abdul Rasheed (Lal Masjid) is clear indicator in this direction.¹³ The concept of blood borders seems to be the extension of Yinon Plan, which also included a fragmented Pakistan along ethno - sectarian lines. We need to ensure communal harmony and address the grievances of aggrieved communities.

Rise of self-proclaimed Islamic State is both surprising and intriguing hence engenders suspicion. If true, then it is fraught with risks. Since chaos, engineered based on faith can get out of control and may even threaten its architect. Self-proclaimed IS can be defeated mainly on ideological plane with selective use of force, as disproportionate use of force could multiply the threat. Strong alliance built around Muslim countries is essential. Activating greater intellectual dialogue and existing organizations in forums such as Arab League and OIC could lead the way. Arab Spring and consequent regime changes have not directly affected Pakistan so far; however, any internal instability in KSA and Gulf countries will have serious security and economic consequences for Pakistan. US - Iran evolving rapprochement, if credibly materialized will be a game changer. This presents both risk and opportunities; possibility of better relations with Iran can help further our trade and accrue stability in Baluchistan. KSA increasing isolation will essentially pressurize and test Pakistan policy in the region. KSA - Iran rivalry if transited into direct conflict can seriously influence our economy. We may have to think for an alternative plan to combat economic challenges in such an eventuality. The solution of the Middle East crisis lies within Middle East; KSA - Iran understanding is necessary else peace in the region will remain elusive. Pakistan due to its special place should play a more constructive role. The probable scenarios presented indicate consequences and demand a relook on our domestic and regional policies.

Important aspects of Pakistan's existing policy on Middle East are; relations in the past have been largely characterized by personal equations with the Arab rulers and have little people to people contact. Russo - Afghan war of 80s not only fundamentally affected our foreign policy in the region; but also disturbed the texture of our internal stability by radicalizing our society. Our economic needs and easy solution led to a clear tilt towards conservative monarchies; Pakistan instead of forging economic alliances and trade partnerships remained contented with aid and oil on subsidized rates. Besides other factors, our visible tilt towards Saudi Arabia kept our immediate neighbors Iran often antagonized. The Saudi - Iran rivalry is a sectarian thorn; it is constantly bleeding the region and has affected Pakistan's internal stability and regional outlook.

Since Pakistan's internal stability has intimate linkage with Middle East, therefore there is a need to define clearly domestic and build on it our regional

policy. We must opt for bilateral relations with states and not personalities willingly delinking ourselves from sectarian clubs. We need to improve our security outlook, induce confidence in foreign investors, and develop long-term durable trade partnerships. Our relationship should help enhance people to people contact; not only our leadership but our Diaspora must also get due respect in Arab world. Pakistan needs to keep pace with evolving situation and develop interest based paradigm for foreign relations with KSA and Iran. We must act as a bridge between the two countries.

While keeping cordial relations with KSA, firm efforts are needed to stay away from the sectarian conflict brewing in the region and ensure that our engagement is not seen as extension of radicalism. We must endeavor for more trade, invest in human resource development and enhance defense cooperation. Exploiting the window of opportunity of US - Iran relations, we need to balance our relations with Iran while pursuing foreign policy objectives with KSA. US - Iran rapprochement happen if it will also open a unique window of opportunity for Pakistan. We must also gradually increase our relationships with Iran. This would not only help further our gas pipeline project, revitalize our bilateral trade but may also help in restoring stability in the region and would help in improving domestic situations in both the countries.

In the aftermath of Arab Spring, the Gulf Countries seem to have become internally insecure and vulnerable, similar eruption again cannot be ruled out. Pakistan should offer its expertise to enhance defense exports and cooperation. After Afghanistan, now Syria and Iraq are turning out to be the playground for the power politics. Pakistan needs to stay away from the heat of this conflict and must ensure that no wrong signal is generated as the same can draw reactions from own radical religious organizations. The ongoing crisis has significantly exposed US / West double standards on human rights and excessive use of force bears strong lesson for Pakistan and whole Muslim community. Pakistan must continue to supports Palestinian cause.

Internal Policy

We must continue to de-radicalize our society, with an objective to avoid rise / linkages of our people to ISIS like phenomenon. Careful analysis will reveal that Pakistan has also been subjected to deliberate sectarian division. Baluchistan and Gilgit - Baltistan have been the center of sectarian violence for last few years. Government must evolve and establish serious mechanism to curb the rising sectarian discord at priority.

We need to improve the living standards of our citizens as unhappy people are natural fodder for radicalization, terrorism and criminality. We have to end political distortion and let people have better governance, justice and law and order. Arab spring was not violent, whatever violence we saw was essentially externally backed; but in Pakistan if we don't correct now we may also see a spring of consequence. Pakistan and Arab nations know for sure that their internal threat is far graver than the external. The people not only need jobs, but they also demand dignity. Mohammad Bouazizi, who ignited the Arab revolts by setting himself ablaze, was actually protesting against the excesses of Tunisian authorities. In Pakistan, the

situation is not very different; at times it is worst -number of incidents of similar nature is on rise – if we don't change, the change is inevitable.

Conclusion

The Middle East is undergoing an era of revolutionary change that is challenging the foreign policies of all the stakeholders. For Pakistan, Middle East has always been an important region, today it offers both complex challenges and as well as unique opportunities. The theories like blood borders and imaginations like GME will keep on popping up mainly due to world's powerful player's quest for greater control on the region and its resources. The possible scenarios we saw today are perturbing as they impact on both our security and economy. We must start from within, improve our governance, de-radicalize our society and above all maintain balance but vibrant regional policy. This is only possible if we keep analyzing the developments in ME with greater focus and objectivity vis-à-vis our national security objectives.

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RESOURCES – CONFLICT NEXUS; IMPLICATIONS FOR SECURITY CALCULUS

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Abstract

Quest for resources has been a challenge confronted by humanity since long; with variations in type and quantum over centuries. Industrialization in the 20th Century further catapulted this phenomenon manifold. Conflicts over the control / access have been one of the major drivers of shaping geo – politics over the past twenty years in which, inter and intra-state conflicts have been seen with varying intensities. Iraq's invasion of Kuwait, followed by 1st and 2nd Gulf Wars is the major examples that have affected the global arena. Burgeoning population in the third world and the increased industrialization, there is a further pull on the depleting global resources. Such a trend is not only to shape the interstate but intra state dynamics of the future. A careful analysis can underscore the criticality of the issue. Pakistan with its inherent advantage of geo-strategic location sits at the cross roads of future energy corridor. Additionally, with the depleting water resources, it also faces water scarcity; which if not addressed, can lead to serious existential threat for human security of the country. In view of the evolving criticality and threat posed, there is need to develop a greater understanding of the interplay of global politics onto the manipulation and access to these resource basis so as to carve out pertinent future strategies and tackle the evolving global energy mosaic.

Introduction

Conflict for resources has been going on perpetually with new dimensions being added as mankind grows both in size and stature. The process of colonization started avaricious quest for resources. As enunciated by Toffler¹, The first wave settlements, being agrarian based, kept quest for resources at a lower key. With the advent of second wave, i.e. industrial age, human contest for resources manifested itself in the shape of colonization and violent wars. This competition is visible among different countries of the contemporary world even today. The pattern may not be similar; the cause – resources – remains the same. Taking example of Arctic ice melting, where the global players are increasingly jockeying to reach out to this previously regarded as barren wastelands.

Resources-conflict nexus has been a complex yet recurring phenomenon. Most of the internal or at times inter-state conflicts over resources have been associated with developing and less developed countries, which often have regional and global security consequences. There are different schools of thought regarding linkages between resources and conflicts. The phenomenon is different in various states depending upon the characteristics of the environment and the value the resource.

Pakistan's geographical location places it in close proximity of energy rich Central Asia and oil-rich Gulf. Pakistan itself is blessed with enormous quantity of resources, awaiting optimal utilization. This endowment can be advantageous if resource acquisition in these areas remains peaceful; on the contrary any conflict

over the resources in these areas has consequences on the regional as well as national security.

Interplay of Natural Resources and Conflicts

Any given conflict in history is not solely attributed to one factor only. Conflicts are caused by a complex set of events. Natural resource is also one factor, which, in combination with other set of conditions, can cause conflicts. UN estimates that 40% of the conflicts have factor of natural resources associated with it². Homer-Dixon³, believes that it is the scarcity of resources which breeds conflicts. The population growth and unequal social distribution are considered as major drivers to fuel the sub-national violence. The second school of thought considers that it is not the scarcity of resources, rather the resource value and the wealth associated with a natural resource that instigates conflicts. It is resource abundance that some countries experience as a “resource curse”.⁴ Abundance or scarcity of valuable resources in itself is not a sufficient cause of conflict. The resource abundance and scarcity perspectives need to be considered in concert with the other factors which interact to create or avoid conflicts. These factors would be analyzed in this paper.

An early study of causes of modern wars during the 1878 to 1918 emphasized that the increasing demand of raw material and energy sources due to industrialization led to the conflicts; for example, the War of the Pacific between Chile and Bolivia (1879–1884). The rising energy demand of growing population and economies and water are strong motives for conflict, as these directly relate with human security. Few examples energy and water related conflicts are:-

- The Iraq-Kuwait war in 1990 was a result of dispute over the Rumaila oil field. The dispute on Kuwait’s slant-drilling and violation of oil quota were the pretexts of Iraq's invasion of Kuwait.⁵
- About 2nd (Gulf) War (2003), much literature is available to suggest that this Gulf war was about oil. Saddam’s intention to trade the oil in Euros instead of US Dollars and securing continuous oil supply to the US and security of Israel⁶ were the catalysts.
- An important cause of the Six Days War between Israel and Arab states was the struggle for water resources of the Jordan River and other rivers in the area.
- Driven largely by water and food shortages linked to drought in the Horn of Africa, almost 185,000 Somalis fled to neighboring countries in 2011.

Weak political structure, poor governance and corruption, mistrust between people and government and lack of social harmony lead to conflicts within society. While non-participative government structure, manipulation of resources by the elites, inequitable distribution of resources among society and lack of just resource use and sharing mechanism between federating units are some more causes contributing towards conflicts.

Democratic Republic of Congo (DRC), Algerian War of Independence (1954–1962) and Rebels fighting in Sudan, Darfur are some examples of poor dispute resolution mechanism which is a strong factor that leads to bigger and longer conflicts. Socio-cultural outlook of a society also plays important role in the conflicts.

Heterogeneous, tribal and religious or ethnically divided societies are more prone to conflicts. World Bank research suggests that societies, in which the largest ethnic group accounts for 45% or more of the population, have a 33% higher risk of conflict.⁷ Lack of education further accentuates the ethnic divide. Violent secessionist movements are statistically much more likely if the low income country has valuable natural resources, with oil being especially dangerous. Examples include Aceh, Biafra, Cabinda, Katanga, and West Papua. Larger conflicts over resources start as local competition (between different groups), often escalating with new actors engaging and new topics being connected to it. In the worst case, conflicts get politicized and become ethnic or religious conflicts. The Angolan Civil War (1975 to 2002), Republic of Chad, The Nigerian Civil War (1967 to 1970) and Sierra Leone are some examples in this regard.

Economic structure of a country plays an important role in onset of conflict.⁸ Three significant factors, i.e. per capita income, rate of economic growth, and dependence of GDP on commodity exports have been identified as indicators for ascertaining probability of conflict.⁹ A recent report by the World Bank¹⁰, found out that states with dependence of 50% GDP or more on minerals, saw their GDP per capita fall 1.15% per year. When a country's growth rate turns negative, civil war is more likely to break out. For three years before the war in the DRC, GDP growth averaged -5.56%; Liberia's GDP growth was -1.94% at the start of civil war. Data¹¹ of world's 20 most oil-dependent and mineral dependent states reveals that the countries which have dependence of GDP more on the export of mineral or oil are prone to conflicts and in-stability. Twelve of the twenty mineral dependent countries have been classified as "highly indebted poor countries" by the World Bank. Since 1990, five of them have had civil wars. Three of the top six states are classified as highly indebted poor countries by World Bank so to conclude we can state that Economic diversity and sustained growth figure out as the most important factor to avoid internal conflicts.

Intra-State Conflicts

Physical scarcity and distribution factors can lead to conflicts for resources. A heterogeneous society with tribal culture and ethnic or religious divide is more prone to conflicts. Poor political structure, bad governance, corruption by elites, mistrust between people and government, lack of socio-eco development and unjust distribution of resources can lead to rebellion or secessionist movements. Lack of economic diversity, excessive dependence on resource exports and low per capita income are strong indicators of potential conflict. Climate change may increase the pressure on natural resources (particularly water and vegetation), which may trigger conflicts.

Inter-State Conflicts

The resource scarcity and energy demand of great powers has a direct linkage with the likelihood of conflict between states. The inter-state conflicts are more about gaining physical control over the natural resource, securing its supply routes and ensuring the sustained supplies. Oil has been the most sought after resource causing the conflicts on natural resources followed by diamonds, gold, copper etc. While the 'need' has been the driver for most of the oil and water related conflicts, 'greed' has

often been the driver for precious minerals based conflicts. Conflict financing by other countries for their vested interests adds violence to the conflict and prolongs it.

Quest for Resources

The ever increasing gap in supply and demand, with more players seeking their share of the pie, resource based conflicts seem likely. Let's briefly look at the resource demand of some important players in the equation.

Oil

Total US oil consumption as of end 2013 is 832 million tons (19% of the World consumption) likely to increase at the rate of 2% per annum. However, the production is 446.2 million tons and proved reserves are only 2.6% of the world. There is a gap of 385.8 million tons and it has to import 46.37% of oil to meet its consumption demand. It may be asserted that at least for the next two decades, the Persian Gulf will be vital to U.S. interests in reliable oil supply.¹²

Total oil consumption of China, as of end 2013 is 507.4 million tons. It is likely to increase at the rate of 3.8% or more per annum. However, the production is 208.1 million tons (5% of the World production) and its proved reserves are meager 1.1% of the World. There is a gap of 299.3 million tons and it has to import 58.99% of oil, which becomes approximately 15% of the total world oil imports, to meet its consumption demand. China has diversified its sources of crude oil imports in recent years. EIA expects China to import over 66% of its total oil by 2020 and 72% by 2040 as demand is expected to grow faster than domestic crude supply.¹³

Total Indian oil consumption as of end 2013 is 175.2 million tons, which becomes 4.2% of the World consumption. It is likely to increase at the rate of 1.2% or more per annum. However, the production is 42 million tons (1% of the World production) and its proved reserves are meager 0.3% of the World. There is a gap of 133.2 million tons and it has to import 76.03% of oil, which becomes approximately 10.14% of the total world oil imports, to meet its consumption demand. The Middle East has been the major source of crude oil supply to India, followed by countries in the Americas (mostly Venezuela) and Africa.

Japan's total oil consumption as of end 2013 has been 208.9 million tons, which becomes 5% of the World consumption. It has shown a decreased consumption trend, mainly because of shifting to renewable energy resources. It does not have any worthwhile domestic production and imports approximately 90% of its required oil, which becomes approximately 9% of the total world oil imports. Its oil supply mainly comes from Middle East with no likely chances of conflict over it, in long term.

Gas

US has proved gas reserves of 330 trillion cubic feet (5% of the World), production is 66.5 billion cubic feet per day. Its consumption is 71.3 billion cubic feet per day, which makes 22.2% of the World consumption. Depending on the phenomenal exploration and shift to Shale gas, no problem is envisaged thereafter as well.

China has proved gas reserves of 115.6 trillion cubic feet (1.8% of the World), production is 11.3 billion cubic feet per day. Its consumption is 15.6 billion cubic feet per day, which makes 4.8% of the World consumption. With the current rate of production, its domestic reserves are likely to last for another 28 years. China is meeting the shortfall of production to consumption by importing LNG, mainly from Qatar and through gas pipeline from Central Asia.

India has proved gas reserves of 47.8 trillion cubic feet (0.7% of the World), production is 3.3 billion cubic feet per day. Its consumption is 5 billion cubic feet per day, which makes 1.5% of the World consumption. With the current rate of production, its domestic reserves are likely to last for another 39 years. India relies upon import of LNG, mainly from Qatar and a part of it from few African countries. Its dependency on import of natural gas will remain in long term.

Japan has no worthwhile proven reserves of gas. It consumes 11.3 billion cubic feet per day, which makes 3.5% of the World consumption. It relies upon import of LNG from approximately 18 supplier countries with highest share from Qatar, followed by Russian Federation.

Water

The world's fastest growing demand of water for industrial and food production and household needs is in Asia.¹⁴ The environmental effects of causing scarcity add to the problems in areas where drought like conditions already prevail.

About 66% of Africa is arid or semi-arid and more than 300 of the 800 million people in sub-Saharan Africa live in a water-scarce environment – meaning that they have less than 1,000 m³ per capita¹⁵. With the increasing population and changing climatic conditions, the water scarcity is going to increase, especially, in Sub-Saharan, Sahel Region, and Nile River line. Its population is expected to nearly double in 50 years, lowering the average per capita amount of renewable fresh water to around 1,100 cubic meters a year. The conflict over water scarcity or water shortage-induced food scarcity can trigger conflicts, especially between the migrants and the locals.

Asia, the home to 60% of the world's population but it has only 36% of its water resources. Per capita availability here is the lowest in the world. Central Asian republics have a looming water crises among upper and lower riparian countries. The lower ones are industrialized but lack requisite water; however, the upper two are under developed. Although there is no significant history of water conflicts in this area, the gradual shift from water sufficiency to water scarcity, may change the equation.

Trends and drivers

China's major economic and diplomatic efforts to secure natural resources, among other actions, involve befriending resource-rich nations that the United States and others see as pariahs. This policy is likely to continue without any troubles however, may lead to application of force for safeguarding natural resources supplies, in long term.

State-controlled energy companies are now working as frontrunners for their respective countries' interests. Taking example of Russia, which is not dependent on external supplies of energy resources, however, it can exercise extended leverages over other dependent countries through its frontrunner company like Gazprom, used for cutting off gas supplies to Georgia, Ukraine, Belarus and Moldova in 2000s.¹⁶ Increased use of such like options, especially in Central Asia and Europe, is not unlikely. There have been examples of use of force to indirectly secure the supply of oil, at least as seen in Iraq War of 2003 and French air campaign against Libya in 2011.¹⁷ Further showdowns of such kind are not difficult to imagine. Sea lanes are crucial to the survival and prosperity of the Asia Pacific countries. Any interruption of these routes by one of the players will be contested by the affected.

Renewable Energy is an important and frequently adopted trend. There has been a total investment of \$214 billion in renewable energy technologies world over in 2013 reflecting the trend.¹⁸ While the trend of research and investment in energy efficient technologies to save on fuel is on the increase, there is a continuous emphasis on developments in Shale Gas extraction technologies, making it most cost effective and environment friendly.

Major players are aligning themselves with different partners into alliances, aimed at securing the future supplies of resources. Securing energy rich regions on one pretext or the other where examples like air strikes in Libya against Qaddafi regime and Iraq War to take out perceived Weapons of Mass Destruction point to this trend. These alignments can help reducing the conflicts due to interdependency as well as trigger conflicts when interests of the global powers are threatened.

There is an increasing focus on Arctic region, with US, Canada and Russia as major players. The Caspian Basin is resource-rich with disputes over the areas among Azerbaijan, Iran, Russia and Turkmenistan. The chances of direct violent conflict are least, however, cannot be ruled out in long term. The possibilities for the opening of new sea lanes and the exploration for natural resources, energy and commerce, also [have] with them dangerous potential for conflict in the Arctic.¹⁹ The region is perceived to contain 7.7 billion proven barrels of oil and around 266 trillion cubic feet of natural gas. It has been a longtime flashpoint of regional tensions, aggravated by the involvement of external players. The Chinese expeditions in South China Sea as part of the 2013-2023 International Ocean Discovery Programme, with mission to search for oil and gas in the South China Sea, is pointing towards this trend.²⁰ Phenomenal development in shale gas exploration will reduce the stress over natural gas thereby minimizing the chances of conflict related to its scarcity.

The world is steadily transiting into multi-polarity. The possibilities and capacity of a single world power to wage war in different regions is waning. With the changing world order, the conflict over resources is likely to take the form of proxies and covert activities. Instability / Intra state war in resources rich countries will cause the major players, dependent on the region for resources, to ensure their influences through indirect / proxy wars. Denial of access to resources by employing direct / indirect means and involvement of major power in the conflict to safeguard their interest. Due to rising interdependencies on resources, emphasis on use of soft power and regional alignments will play a greater role in ensuring access to

resources. Resources demand vis-à-vis shortage could create the potential for instability.

Dynamics for Pakistan

Pakistan is largely dependent on import of energy from Middle East whereas most of the countries in the region including India are diversifying their energy need for the standpoint of evading consequences of destabilizing of dependent energy rich region. Substantial investment in alternative energy sources by Pakistan is not visible. The low storage capacity will have consequences towards oil-stamina of the country. Inadvertent delay on major transnational gas import projects, would keep the demand and supply gap widened; hence discontent of the public. Dwindling domestic production of energy; likely shortage by Year 2022.²¹ Balochistan has great potentials of oil exploration.²² However, unless the security situation is improved the potentials will not be used optimally.

Increasing scarcity has the prospects for trans-boundary and intra-state conflicts. Interplay of domestic politics causing delay in water storage projects, increasing the water scarcity can lead to internal fissures. Lack of water preservation and management in rainy season, causing damage to life and property, adds chances of desperate domestic acts of violence.

Pakistan possesses extensive reserves of mineral deposits; however, the current contribution of mineral sector to the GDP is meager 0.5%. Deteriorating law and order situation and security issues are proving to be major barriers against the inflow of FDI, especially in Balochistan and KPK.²³ Terrorist groups, if get hold of some mineral source in the tribal belts of Balochistan and KPK, can use it for conflict financing. According to EIA 2013 report,²⁴ Pakistan holds 105 trillion cubic feet of technically recoverable Shale Gas reserves. If capitalized, these reserves can meet the energy demand of Pakistan for long term.

Geo-strategic location of Pakistan places it as a bridge state for connectivity based economy, linking various regions. China-Pakistan Economic Corridor, although a landmark, is just a fraction of the bright prospect that this geographical advantage holds for Pakistan. However, the prospects of stability or prosperity in view of conflicting interests of global and regional stake holders, manifesting into proxies, remain a challenge for Pakistan.

Analysis

No resource pressure has grown faster than the demand for fossil fuels, which are finite and present reservoirs are rapidly diminishing. The industrialized and rising powers have a compulsion to meet their energy demand and the quest for clout and resources will continue to challenge global security. The Middle East will remain vital to the West, especially the US, for reliable oil supply in the long term. Any interruption or threat to the sustained oil supplies may result into a conflict. Owing to the centrality of the Middle East in oil supply, the conflict here will have global effects.

Increasing Chinese acquisition in Africa may put it in confrontation with oil companies of powerful countries in long term with enhanced regional security

consequences. Although the US-Iran rapprochement has improved the security concerns to an extent, the overall security mosaic remains complex and delicate. Growing influence of ISIS, turmoil in Syria and Libya, and recent Yemen crisis will bear heavily on global oil supply prospects. The competing interests of major players could result into a global fall out. Securing the gas supplies or their closure to other countries, through diplomatic maneuvers and coercive actions has been in vogue. With the precedence, conflicts of global security consequence are not likely to happen over gas in mid to long term. The shale gas revolution has considerably re-calibrated the global players' orientation and long term strategy for the quest of natural gas. Phenomenal development in this sector will reduce the stress over natural gas in the long term. Water being a non-transportable commodity over longer distances, conflicts over it is likely to remain confined to a domestic or bilateral level. India is likely to increasingly suffer water stress as a result of population and industrial growth; hence there are chances of increased violations of Indus Water Treaty by India.

Globalized Scenario

Instead of direct conflicts / involvement, trans-national companies are increasingly acting as the forerunners of the parent-states, raising the stakes of a resource-rich country and its elites in trade cooperation with these companies. The Arctic resource reserves are likely to be contested intensely as existing reserves of oil and gas are depleted over the coming decades; however bigger powers like US, China, Russia and Canada are likely to prefer proxies instead of a direct conflict. The disagreements over division of the seabed among the Caspian littoral states have increased the possibility of conflicts as Russia, China, Turkey, Iran, and the United States seek to secure their interests in the region. The likelihood of denying the resources to the other contesting country(s) or through insurgencies and internal conflicts is more as compared to the direct confrontation between the states. Increased resource demand, coupled with the absence of any peaceful solution to the boundaries issues and Global players' interests combined together bear potential for a conflict in mid to long term, having global security implications.

Intra-state conflicts over resources are more likely to develop in the low income and less developed countries with lack of economic diversity, heterogeneous society with tribal culture and ethnic or religious divide. Unless the benefits of extracted resources are transferred to the native populous, probability of internal conflicts will remain there. Such conflicts may exacerbate with the interest and involvement of external players.

Security Implications for Pakistan

Pakistan's oil imports are modest and heavily dependent on Middle East, especially Saudi Arabia. Although the disturbance in the Gulf may not directly impact the oil supply, it would have security implications being in close proximity. Conflict in Caspian littoral states will have security implications for trans-national energy projects with spillover of ethnic and sectarian clashes. CPEC and resultant development of Gwadar Port run opposed to the interests of some regional and extra regional players. Such a conflict of interests bears consequences for Pakistan, keeping the security situation in Balochistan fragile. Moreover, being in immediate

neighbourhood, any contest over resources of Central Asia and Caspian Region also has security implications for Pakistan.

Pakistan, being water stressed country with trans-boundary and intra-state water issues and limited storage capacity may face serious economic and food security issues, both at intra and inter-state levels, in mid to long term. The existence of potential reserves of Shale Gas in areas closer to Indo-Pak borders, including the disputed boundary at Creeks, could become a source of bilateral conflict in mid to long term. The discovery of minerals and fossil fuels in Balochistan is likely to further the incentives for defecting *sardars* towards secessionist movement, as well as enhance the interest of regional and global players in the area. Pakistan's mineral and other resource potentials are vastly located in low-developed and tribal areas which are already causing instability. Continued deprivation and grievances, coupled with external rival factors have national security implications for Pakistan.

Way Forward

Pakistan's oil supply is largely dependent on Saudi Arabia; a part of it also comes from the Gulf. Any disruption in the supply sources or routes will adversely affect Pakistan. Therefore, Pakistan must diversify its oil sources especially from Oman and Africa. Optimizing Gwadar Port can act as a vital link to China, Afghanistan and the Central Asian Republics, throughout the year. Given any conflict in the Gulf, and to optimally use its significance, Pakistan must fast-track the port facilities to include oil terminals and road linkage to up-country. Improve law and order situation in Balochistan by a two-pronged strategy of effective law enforcement along with political harmony and socio-economic development. We must seek for complete peace and stability in Afghanistan, since optimum utilization of Gwadar Port depends upon its linkage with Central Asia, route passing through Afghanistan.

A large quantity of unexplored resources is estimated to be present offshore as well as inland. These should be explored and capitalized with highest priority to reduce external dependence. Taking lessons from the study of the conflicts, Pakistan must address the potential causes of intra-state conflicts for example socio-economic development of the backward and resource-rich areas to eliminate sense of deprivation and improve governance to ensure that the benefits of the extracted natural resources are shared by the native populace as well. Situation in Balochistan and FATA can be handled with two-pronged strategy for which separation of secessionist privileged *sardars* from the citizen by directly benefiting the masses through development and poverty alleviation programmes. Forging sense of security among the citizen to stand independent of *sardars* and militant leaders. While on the other hand there should be targeted operations to deal the hardcore militants with the heavy hand. The links of militant leaders and *sardars* with external players and their financing should be cut by adopting proactive monitoring and counter measures.

The instability in Middle East is likely to endure, with increased capacity of financing the conflict by ISIS through seizure of oil fields. Pakistan should proactively undertake elimination of breeding grounds for the extremists, especially the long awaited measures in Southern Punjab. LEAs and intelligence based operations be made effective use of to break any possible linkages of these extremist elements with the ISIS and other such militant organisations, as these have the

capacity to finance as well as influence the ongoing low intensity conflict in the Country.

Pakistan's water situation is not encouraging. Growing shortage has a conflict potential, both at domestic as well as bilateral levels with India. To avoid such conflict, we should improve water management through conservation and development of additional storages, taken as an immediate national priority and proactive pursuance of implementation of Indus Water Treaty is ensured.

Pakistan should follow a proactive diplomacy to join the contemporary regional alliances for mutual cooperation on energy supplies and conflict avoidance / resolution. We must evolve a consensus-based conflict resolution mechanism, with legal cover, involving; equal representation from all federating units at national level and intra-province mechanism should have representation of all ethnic factions.

Conclusion

Since the Twentieth Century, the resource consumption has grown incredibly fast, just like the population growth. Governments around the globe are running for economic progression, for which secure and continuous availability of resources is a must. The identified trends have strong potential for triggering conflicts, but are not inevitable. With right policies in place and preparing for the challenges ahead, we can mitigate the threats of conflicts and brace for peaceful progress future.

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PART – II

National Security

- **Coastal Development in Pakistan – An Integrated Approach to Internal Security and Economic Growth**
- **Economic Policy for Pakistan**