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CONTENTS

DRUG ABUSE: GLOBAL VS SOUTH ASIAN TRENDS WITH SPECIAL REFERENCE TO INDIA AND PAKISTAN

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Introduction

Drug abuse poses serious risks to human health. It is a leading cause of infectious diseases such as HIV, Hepatitis B, and Hepatitis C with the sharing of contaminated syringes, and eventually leads to short-term or permanent disability. In case of overdose, premature deaths could also occur. A recent study 'Global Burden of Disease' reveals that drug dependence alone is responsible for almost 3.6 million years of life lost due to premature death and 16.4 million years of life lived with disability, both equal to 20 million years of disability-adjusted life years (DALY) in 2010.[1] Moreover, in 2012 around 183,000 drug-related deaths were reported, and between 162 million and 324 million people of age 15-64 used illicit drugs mainly cannabis, opioid, cocaine, and amphetamine-type stimulant (ATS).[2]

Despite wide acknowledgment of substance abuse's risks to human health and social life, drug abuse is on the rise. Strict laws and massive seizure of illicit drugs every year did not serve the purpose. Smugglers and addicts are discovering modern ways to skirt around legal constraints. These discoveries are also giving rise to a shift in patterns of drug use worldwide. Most of the people are now switching to synthetic drugs. These drugs are made by altering the composition of legal chemicals while retaining their psychoactive effects. These altered chemicals are hard to identify, hence easily evade psychoactive substances lists. This shift is largely because of financial constraints as synthetic drugs are cheaper than organic drugs like cocaine and heroin and can be made

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easily in the kitchen from ephedrine, hydrochloric acid, car battery fluids, and ethanol. This shifting trend in patterns of drug use is a matter of serious concern, particularly for a region like South Asia, which is a victim as well as a source of illicit drugs.

South Asia is highly vulnerable to organic drug abuse as well as the emerging trends as it is arrested between the largest heroin and opium producing regions of the world—the Golden Crescent (consisting of Afghanistan, Pakistan, and Iran) and the Golden Triangle (referring to the triangular zone in Southeast Asia that overlaps Burma, Thailand and Laos). Apart from extensive organic (plant-based) drug dependence in the region, a number of people use liquor for which they rely on local illicit distilleries. Most of the distilleries are working in remote and slum areas and offer cheap liquor. Those who cannot afford even locally made liquor, try preparing it at home and often adopt wrong techniques. For instance, to enhance its potency, liquor is spiked with deadly chemicals (methanol, sleeping pills, cough syrups, and even pesticides) which creates serious emergency conditions. A number of deaths are reported every year due to homemade tainted liquor, such as 'tharo', 'kuppi', 'moonshine', and the list goes on. Similarly, middle and affluent class university and college students, and even schoolchildren are tilting towards the synthetic drugs adventure that is leading to retardation, poor performance, and drug dependence among them. Hence, there is a dire need for a holistic drugs control policy that would deal with the emerging dynamics of organic and synthetic drugs.

Moreover, governments and civil society on their part must initiate awareness programmes focusing on the consequences of new classes of drugs. In line with this thinking, this study deals with the existing and emerging trends in illicit drug use and its implications for South Asia. It begins with highlighting prevalent organic drug abuse from a global as well as South Asian perspective, particularly, India and Pakistan. Facts and figures for illicit drug consumption are also presented. Trafficking networks and major drug production spots along with their supply routes in and out of South Asian region are also discussed in this section. Section two discusses the emerging synthetic drugs including Amphetamine-type Stimulants (ATS) drugs abuse in the same pattern given in the first section. In line with this thinking the study draws implications and suggestions for South Asia. The paper concludes that in South Asia, particularly Pakistan and India, already grappling with endemic organic drug abuse, the rise of synthetic abuse is grave and alarming. It is posing serious challenges for illicit drug control. There is a dire need to initiate awareness campaigns about the dangers of these chemicals so that their misuse can be avoided. Both India and Pakistan, being the largest states in South Asia should think out of the box. They must realize the gravity of this issue and proceed in a cooperative framework.

Organic drug abuse

Organic drugs are plant-based drugs. Cannabis, coca bush, and poppy are nature's addictive plants. Cannabis is obtained from hemp, cocaine from the leaves of coca bush, and opium is extracted from the poppy plant. These plants contain significant quantities of psychoactive ingredients. Since the beginning of

the recorded history, these drugs have been used for medicinal and surgical purposes (their therapeutic effects helped reduce severe pain and also served as anti-diarrhoeal). Later on, the psychoactive ingredients of these plants proved highly addictive as a number of people became intolerant to these stimulants. Its usage for mood-alteration such as to have a feeling of extreme euphoria and elation grew alarmingly with the passage to time.

Prevalent trends—global view

Opium

The opium poppy is a hard, drought-resistant plant. The word poppy is derived from Latin that means 'sleep inducing'. Opium is classified as Papaver Somniferous that produces mainly two products: opium and seeds. Former is acquired from the sap or latex produced inside the pod also called capsule (see Figure 1). It is highly addictive as it yields many alkaloids, however, its seeds are quite harmless and used in cooking to enhance flavour. The raw opium contains some twenty alkaloids, of which morphine is the most active substance, named after Morpheus, the Greek 'god of dreams'. Other notable psychoactive substances are codeine, baine, papaverine, and noscapine. It can be drunk, swallowed, or smoked. In Third World countries, it is mostly consumed in traditional means; eating and smoking.[3] Heroin is derived from morphine, which is two to three times more potent and highly addictive. Its common names are Smack, H, Ska, Black Tar, Dope, and Junk. It is sold in white or brownish powder form in the market. The white crystalline form is a pure form and cut with other substances such as sugar, starch, powdered milk, quinine, and somewhere, with strychnine or other poisons. The consumer is on high risk as he/she does not know the actual strength of the drug or its contents which can be fatal in case of overdose. It exhibits a surge of euphoria (rush) and clouded thinking followed by alternatively wakeful and sleepy states.[4] Overdose of heroin poses serious health problems; for instance, suppression of breathing and lack of oxygen supply to the brain may lead to a condition called hypoxia. It has short- and long-term neurological effects on the body such as comma or permanent brain damage.[5] It is mostly injected, but it may also be smoked and snorted, used as a suppository, or orally ingested. Smoking and snorting do not produce rush as instantly as intravenous injection or suppository route do. Through any route it is considered highly addictive and placed in the Schedule I drugs (see Annex for Schedule I, II, III, IV and V drugs). The intravenous route is more risky due to sharing of contaminated needles that lead to HIV/AIDS and Hepatitis among the abusers.

Figure 1

Opium Capsule

Source: John Glaze, 'Opium and Afghanistan: Reassessing US Counter Narcotics Strategy', Strategic Studies Institute, U.S. Army War College, Carlisle, PA, October 2007.

Opium poppy plant has a long history. It was first cultivated in Southwest Asia, around 3400 B.C., where the Sumerians[6] named this plant 'Hul Gil' meaning 'a joy plant'. Its demand grew alarmingly as the people learned of the power of this plant. Its cultivation spread across the Silk Road, from Mediterranean to Asia, which led to the emergence of 'Golden Crescent' and 'Golden Triangle', the two major illicit drug production spots. Now, it is also cultivated in Eastern Europe, and North and South America. The area of Golden Crescent consists of Afghanistan, Pakistan, and Iran; and Golden Triangle region refers to the triangular zone in Southeast Asia that overlaps Burma, Thailand, and Laos. In the early 1990s heroin became a leading illicit drug and 80 per cent of heroin in Europe and 20 per cent in the United States was supplied through the Golden Crescent region.[7] Afghanistan became its primary producer in 1991 with a yield of 1,782 metric tons (US Department of State estimates), surpassing Myanmar, once world's top producer.[8] According to Jeffrey Steinberg in the *Executive Intelligence Review* journal:

> Since 1980, Afghanistan has been the source of half of the heroin sold in Europe and North America. Some opium was grown in areas under Soviet control, but most of the production was in the Helmand Valley in southwest Afghanistan, and along the Afghanistan-Pakistan border northeast of Kabul, areas controlled by the mujahideen and the Pakistan Army. Hundreds of heroin labs were set up in the nearby frontier areas in Pakistan. Heroin was routed to the world market via Iran, India, the Asiatic republics of the U.S.S.R., and by Arabian Sea routes to Turkey.[9] (See Map 1 below)

Map 1

Golden Crescent Heroin Route

Source: *Executive Intelligence Review*, Vol.22, No.41, 1995.

The opium poppy cultivation in Afghanistan alone in the Golden Crescent Region was estimated at 224,000 hectares (ha) in the year 2014, a 7 per cent increase from 2013. The average opium yields were estimated at 28.7 kilograms per hectare (kg/ha) in 2014, which was a 9 per cent increase as compared to previous year's figure of 26.3 kg/ha. In terms of the overall potential opium production, it stood at 6,400 tonnes in 2014 which too was on an upward trend of around 17 per cent increase from previous year (5,500 tonnes). [10] Much of these drugs are traded via Iran, Turkey, and the Balkans route. It seems to be a major trading route for the transit of Afghan heroin to the Western and Central European markets. Another route, adopted after the Iranian sanctions on heroin production, is through Fergana Valley (spread across eastern Uzbekistan, southern Kyrgyzstan, and northern Tajikistan) towards Russia and the Baltic States.

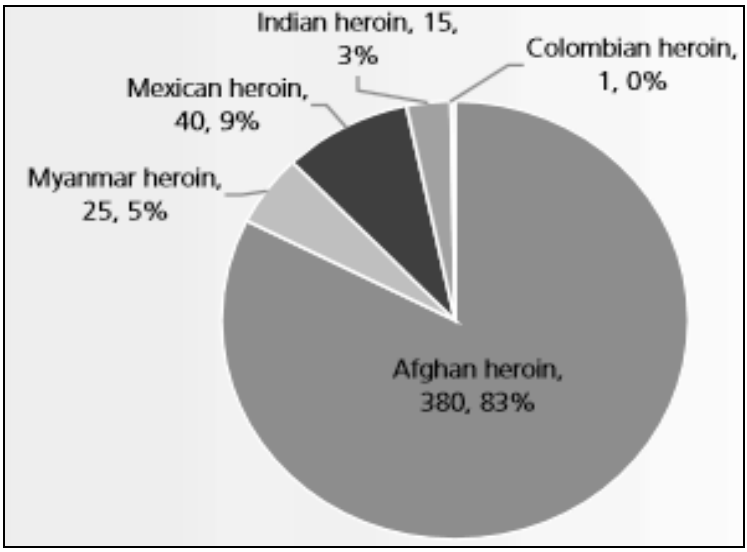
Recently, Afghan heroin has started reaching new markets, such as Oceania and Southeast Asia, which had been supplied from the Golden Triangle Region for decades. Heroin is also smuggled through the southern route, from the south of Afghanistan to Europe via the Near and Middle East, and Africa. The two major seizures of more than 100 kilograms of heroin by Kenya and United Republic of Tanzania in the year 2011, disclosed the rise of the African route. Earlier, it was considered as a cost-effective trafficking route, but no major seizure was reported.

Since the 1990s, Myanmar's opium production is on decline as

Afghanistan is approaching East Asian markets and filling the gap. Afghan heroin is increasingly trafficked even to China, but the level of trafficking is dependent on Myanmar's opium production.[11] Overall, the Afghan heroin dominates the world market as compared to other four heroin producing countries: Mexico, Myanmar, India, and Colombia (see Figure 2 below).

Figure 2

Global Heroin Production



Source: *Global Afghan Heroin Trade: A Threat Assessment,* UNODC, 2011.

Opium poppy cultivation in the Golden Triangle, on the other hand, is again gaining momentum, although it is far behind Afghanistan. According to United Nations Office on Drugs and Crime (UNODC) Opium Survey, in Myanmar and Laos, cultivation increased again for the eighth consecutive year, nearly tripling the amount harvested in 2006.[12] It increased to 63,800 ha in the year 2014 from 61,200 ha in 2013. Myanmar remains Southeast Asia's top producer and world's second largest after Afghanistan. The survey further reveals that the countries produced an estimated combined total of 762 tonnes of opium in 2014 and that most of the opium refined into heroin used smuggled precursor chemicals like acetyl anhydride. The total amount of heroin after processing is estimated at 76 tonnes which is trafficked to neighbouring countries and outside the region. It has become a profitable business for the translational crime groups because of increasing demand for heroin. There is a two-way trade going on in which chemicals are coming in and heroin is going out of the Golden Triangle.[13] The major chunk of heroin goes to China that accounts for nearly 70 per cent of heroin users in Asia and is the largest single heroin market in the world. Between 2007 and 2013, the number of heroin users in China increased by approximately half a million, and is currently estimated to be over 1.3 million. Besides China, heroin remains a primary drug of concern in

Malaysia, Singapore and Vietnam. Overall, there were more than 3.3 million opiates users in East and Southeast Asia in 2014 (See Table 1). Globally, the opioids (including heroin and prescription painkillers) users were estimated between 28.6 million and 38 million in the year 2013, concentrated in Oceania and North America, particularly in the United States. The opiate (heroin and opium) users on the other hand are concentrated in Southwest Asia, Eastern and South Eastern Europe, and Central Asia and Transcaucasia.

Table 1

Estimated number of opiate users and prevalence in Southeast Asia

	Estimated number of opiate users	Prevalence (%)	Year of estimate
China	1,930,000	0.19	2012
Viet Nam	342,806	0.53	2011
Myanmar	293,583	0.80	2010
Malaysia	187,771	0.94	2009
Indonesia	174,652	0.11	2010
Thailand	96,284	0.20	2007
Taiwan, Province of China	34,604	0.20	2005
Philippines	20,880	0.04	2011
Lao People's Democratic Republic	14,863	0.37	2008
Singapore	12,488	0.32	2010
China, Hong Kong SAR	10,674	0.20	2006
China, Macao SAR	4,978	1.12	2003
Cambodia	3,312	0.04	2007
Korea (Republic of)	357	0.00	2004
Estimates for other Member States[17]	210,711		
Total estimated number and prevalence of opiate users	**3,337,962**	**0.21**	

Sources: *Southeast Asia Opium Survey 2014*, UNODC, p.5.

Overall, global area of opium cultivation including Golden Crescent and Golden Triangle stood at 296,720 hectares in the year 2013, the largest area since 1998. With a huge production and consumption, the opiates and opioids ranked top on the list of problem drugs worldwide.

Coca bush

Coca is also nature's highly addictive plant in the family of Erythroxylaceae. It is native to the Andes Mountains of South America including Colombia, Peru, and Bolivia. Like opium poppy plant, it also yields many alkaloids. Some notable alkaloids are methylecgonine cinnamate, benzoylecgonine, truxilline, hydroxytropacocaine, tropacocaine, ecgonine, cuscohygrine, dihydrocuscohygrine, nicotine, cocaine, and hygrine. Cocaine, a crystalline alkaloid is obtained from the leaves of coca plant (see Figure 3 below). It is a highly addictive central nervous system stimulant and placed in Schedule II drug category. Its common names are Coke, Snow, Flake, or Blow. It is snorted, smoked, and injected. Mostly, Crack, a form of cocaine, is used to smoke. It is hydrochloride powder that has been processed to form a rock crystal which is then heated to produce vapours that reach the blood stream via lungs. While heating, it produces a crackling sound; therefore, it is called 'crack'.[14] It produces short-term euphoria, alertness, and feeling of competence and sexuality. Its effects on the body depend on the method of intake, usually lasting for 15-30 minutes. In addition to alertness, it is potentially dangerous as it increases heart beat and blood pressure that can be fatal in case of overdose or first-time use. A number of cases of heart attacks and strokes have been reported among the people who use cocaine for the first time. Overdose also causes paranoia in which people may become violent.

Figure 3

Coca plant

Source: BBC.com

Historically, it has been used to relieve pain, combat altitude sickness, and as a stimulant for around 4,000 years. It has also been used as an anaesthetic medicine. In the late 18th century, cocaine was used as a primary ingredient in Coca Cola for flavour, however, in early 19th century, the use of cocaine in its

crude form in the soft drink was stopped and extract of coca leaves (a de-cocainized version) was adopted for flavouring Coca Cola manufactured in the United States. For most of the South American countries (Peru, Bolivia, Ecuador, Colombia, Argentina, and Chile) this plant has strong religious cosmological value and is considered a 'sacred plant'. Andean people used to chew the leaves of coca plant or brew into tea. Similar to opium, it is cut with substances such as sugar and baking soda or with local anaesthetics that enhance its potency and weight. It has made cocaine more injurious to health though. After opium, cocaine is ranked second top problem drug in the world. Its cultivation is limited to Bolivia, Colombia, and Peru that meet the world demand of the drug. Americas (North and South), Europe, and Oceania are the top users of cocaine, but it is most problematic in Americas. Due to maritime seizures, its use is found to be declining in North America. In South America, however, both trafficking and consumption have become more prominent. Western and Central Europe are the second largest market of Bolivia-Colombia-Peru's cocaine.

According to latest estimates, the coca bush cultivation is steadily declining. As of December 2012, it was 133,700 ha, the lowest since 2003. In terms of global usage, it is estimated between 14 million and 21 million. North and South America are leading in cocaine users, while in Western and Central Europe its usage is found to be declining. A number of factors contributed to the overall decline in cultivation and consumption, particularly in Western Europe such as the shifting trends in the use of illicit drugs worldwide and the emergence and rise of synthetic drugs. This shifting trend has serious implications for the South Asian countries as well, and will be discussed later in this paper.

Cannabis

Cannabis is the third naturally addictive plant. Numerous cannabis strains have been discovered and are still being discovered. The best known strains are cannabis sativa, cannabis indica, and cannabis ruderalis. Among these, cannabis sativa is the most popular and powerful strain. It grows wild throughout many tropical and humid parts of the world. Cannabis was first discovered in China around 6,000 years ago and then in India, Middle East, Africa, Mexico, and South America. The common names of cannabis are Ganja, Hashsih, Hemp, Joint (English), Bhangh, Charas (Indian), marijuana (Mexican), pot, weed, and 420 (see Figure 4 below). The delta-9-tetrahydrocannabinol (THC) found in cannabis is potentially addictive hence it is placed in Schedule I drug category. Higher the level of THC, greater the impacts would be. Recent biotechnological advances have made it possible to achieve higher level of THC up to 15 per cent and more. Permitted concentration, however, is below 0.4 per cent.[15]

THC is mainly found in the resin secreted by the flowering top. There is also a distinction between male and female plant, a female plant is shorter than male plant and contains higher levels of THC as compared to male. The dried leaves and the flowers are known as marijuana or herbal cannabis. It can be smoked through pipe, hand-rolled into a joint, or eaten. The resinous part of the cannabis plant is called hashish or hash. It contains high level of THC, and is obtained from the dried resin of the plant and compressed to form balls, cakes etc. Around 45 to 75 kilograms of cannabis produces one kilogram of hash that is sold in brown or black pieces in hard or soft consistency.[16] The oily extract of the plant is refined to obtain hash oil that contains approximately 15 per cent THC. It is mixed with the dried leaves of marijuana and smoked. The fibrous part of the plant is called hemp, which originated in Central Asia, Middle East, and India, where it had significant ritual value. Later, it made its way to Europe and Americas. Hemp and marijuana are both used in the preparation of many products such as cereals, candies, coffees, and teas.

Figure 4

Cannabis Plant

Source: *Telegraph*, UK.

Cannabis products are widely trafficked throughout the world. Almost every country is affected by cannabis trafficking. Herbal cannabis, marijuana, is virtually everywhere, while the resin cannabis, hashish, is found in as many as 65 countries, most concentrated in North Africa and Southwest Asian countries, particularly, Afghanistan and Pakistan. In terms of production of hashish, Africa is leading. Most of the seizures reported in Europe were of hashish trafficked from Morocco (world's largest cultivation site). Afghanistan ranked second in the production of hashish. Lebanon had also been a leading hashish supplier. Marijuana production is concentrated in American continent that accounted for some 55 per cent of global production in the year 2006, followed by Africa at 22 per cent.[17] Most of herbal cannabis produced in the continent is confined to domestic usage or export to neighbouring countries. International trafficking in this regard is rather limited as compared to hashish; however, growers have been able to achieve more potent forms of cannabis through exclusive cultivation of female plant. Currently, indoor production of Sinsemilla (female plant) is going on in many countries.

Cannabis affects the body within minutes of intake. It reaches its peak within thirty minutes and lasts for two to three hours. The THC target specific site in the brain, called cannabinoid receptors, kicks off a series of cellular reactions that lead to euphoria, distorted perception, increased sight, hearing, and taste with low to moderate doses. In chronic users, marijuana adversely impacts on learning and memory that can last for several days. Overdose may result in sedated feelings and toxic psychosis, in which the user temporarily loses consciousness and forgets who he or she is? Recent research by a Pakistani scientist, Dr. Shakeel Raza Rizvi, reveals that youngsters who regularly use marijuana before reaching puberty usually end up around four inches shorter than their non-smoking peers. He argues that "marijuana use may provoke a stress response that stimulate onset of puberty but suppresses growth rate."[18] According to latest estimates, between 125 million and 227 million people are reported to have used cannabis (marijuana and hashish), corresponding to 2.7 per cent to 4.9 per cent of world population aged 15-64 years. West and Central Africa, North America, Oceania, and to a lesser extent, Western and Central Europe are found leading in global average. In North America, over the last five years, cannabis consumers are steadily on the rise. In the United States alone, between 2006 and 2010, around 59 per cent increase was reported in cannabis related emergencies and 14 per cent increase in admissions for cannabis related treatment.[19]

Prevalent trends in South Asia

Historically, the subcontinent has been exposed to notably two types of narcotics: opium and cannabis. Opium was carried to India and China by Arab traders in the 9th and 10th centuries. During the time of Mughal Emperors, opium was cultivated as a cash crop. Later, under the British rule, poppy cultivation further boosted to generate revenue through domestic and international trade, particularly to China—the largest market of Indian opium. With the passage of time, British maintained a monopoly over opium and cannabis. The Second

World War disturbed the trading pattern, however, and most of the opium was diverted to medicinal usage in treating the war victims.[20]

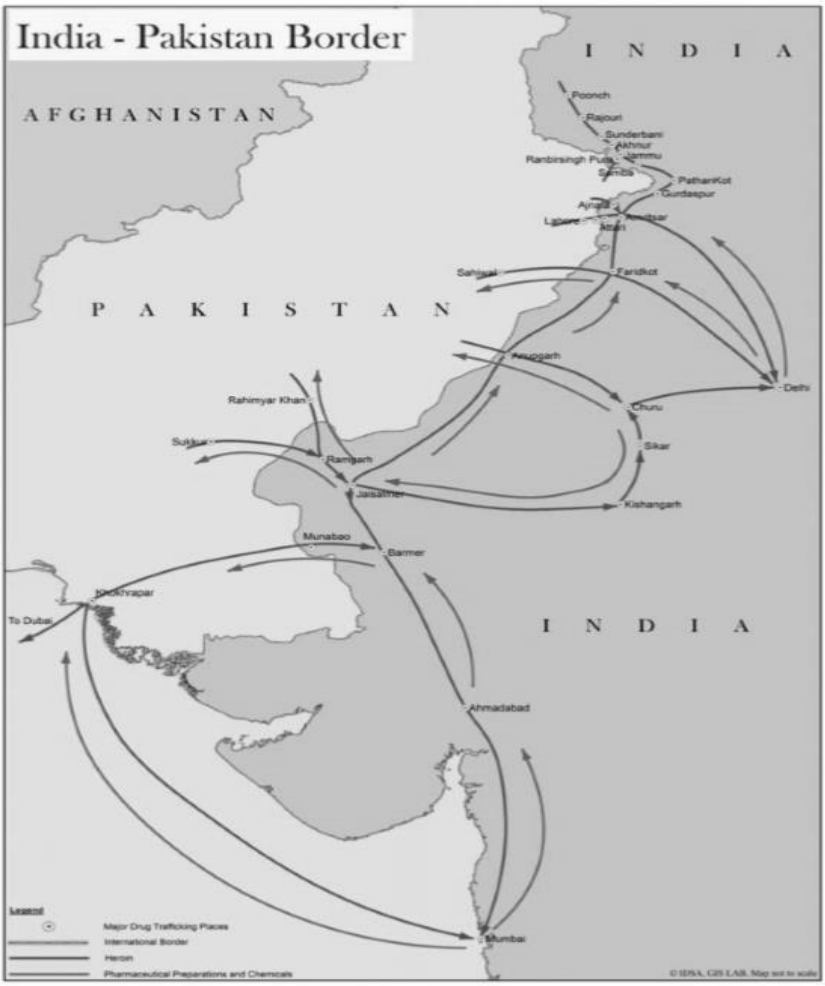
Illegal cultivation is still rampant in South Asia. The region is home to one of the world's largest illicit opium production zones—the Golden Crescent. It is also affected by illicit drug trafficking via the south-eastern route, the Golden Triangle. In both scenarios, India and Pakistan are the sandwiched states. Both are the victims as well as the source of illicit drugs. In both states opium and cannabis are commonly used. The cocaine produce from coca bush is not native to this region, however, recent reports claim its presence as smuggled from Latin America.

Opium

Opium is widespread in rural India, but the trend in urban population is different. A study 'Ethnographic account of traditional opium use in India' reveals that opium is consumed in broadly two forms: the nugget and the powder form. The nugget is dissolved in water, filtered, and then the extract is drunk. In contrast, the powder is smoked.[21] Throughout the Indian border state of Punjab, opium is prevalent, refined as heroin or other illegal substances. Most of the addicts are aged between 15 and 35. Its abuse is common among the school-going boys as well. They eat small black balls of opium paste with tea. There are around 8,000 government liquor stores operating in the Indian Punjab state alone. The liquor consumption in the Punjab rose to 59 per cent in five years between 2005 and 2010.[22] According to the 2004 estimates there were around 1.4 million opiate abusers in India. According to 2010 estimates, the number of abusers rose to 1.54 million (heroin 871,000 and opium 674,000). Today, almost 18 per cent of India's population aged 15-64 is exposed to opiates originating between Southwest Asia and East Asia. Over the past three decades, India has become a transit hub as well as the destination for heroin and hashish production of Golden Crescent and Golden Triangle. It is observed that heroin of Southwest Asia reaches India via the India-Pakistan border and is then trafficked to Europe, the United States, and Southeast Asia. It is mainly traded via Gujarat, Rajasthan, Punjab, and Jammu and Kashmir. There is a two-way trade going on, as the heroin and hashish coming in and precursor chemicals such as ephedrine, pseudo-ephedrine, and acetic anhydride going out of India (see Map 2 below).

Map 2

India and Pakistan cross-border drug trafficking



Source: Institute for Defence Studies and Analysis, *IDSA*, Occasional Paper No.24

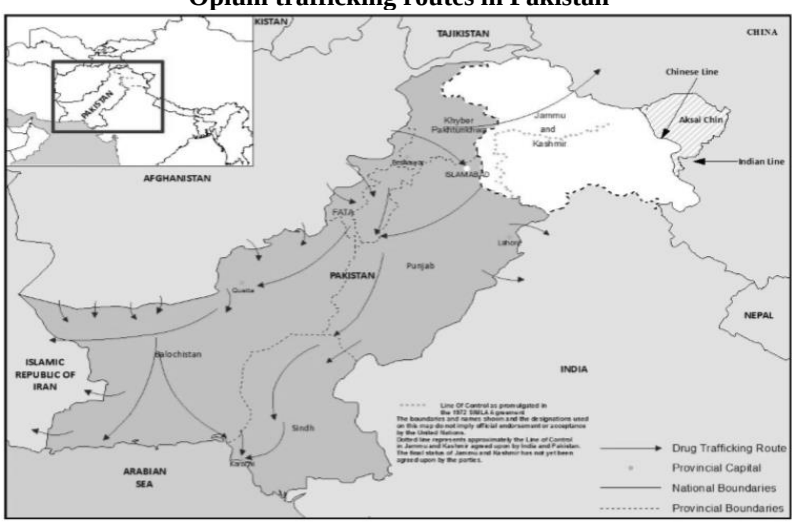
In contrast to Southwest Asian route, the heroin produced in the Golden Triangle is being trafficked into India through India-Myanmar border into the states of Mizoram, Manipur, and Nagaland from Bhamo, Lashio, and Mandalay. Besides smuggled opium, a small amount of illicit opium cultivation is reported in India, particularly in Himachal Pradesh, Kashmir, Uttaranchal Pradesh, Arunachal Pradesh, and to some extent in Karnataka.[23] India is the only country that has allowed domestic opium gum production, a portion of which also goes into illicit channels and is then converted into heroin. The heroin production in India is evident from the latest world drug report which states, "the share of the heroin of Southwest Asian region as proportion of total heroin seizures in India

in the year 2011 was estimated at 45 percent, while most of the remaining around 54 percent originated in India itself."[24] It is being smuggled to bordering states such as: Bangladesh and Sri Lanka. Besides, it has reached North American and Canadian markets. The Canadian authorities continue to identify Indian as well as Pakistani origin of heroin in its market. The US and Indian state authorities indicated that there was a flow of heroin from the latter to the former.

In Pakistan, opium poppy is cultivated mainly in three types of administratively diverse areas: settled districts of Khyber-Pakhtunkhwa (KPK); merged areas or the Provincially Administered Tribal Areas (PATA), and the Federally Administrated Tribal Areas (FATA). Poppy cultivation in FATA and PATA accounts for almost all the production in Pakistan. In 2003, poppy cultivation was first reported in Balochistan province and in the same year poppy cultivation was reported at 6,703 ha in the country.[25] Pakistan is more vulnerable as compared to India as it shares border with Afghanistan, which is the world's largest opium producer. Five provinces of Afghanistan that account for almost 70 per cent of the total opium production of the country share border with Pakistan. These are: Kandahar, Nimroz, Nangarhar, Badakhshan, and Helmand. Pak-Afghan border is largely porous, which facilitates trafficking of Afghan drug to Pakistan and then to various parts of the world. The areas in Balochistan like Zhob, Chaman, Taftan, Mand, and Makran coast serve as dumping sites before it is trafficked to Turkey and Western Europe.[26] Map 3 below highlights reported opium trafficking routes in Pakistan.

Map 3

Opium trafficking routes in Pakistan



Source: *Drug Use in Pakistan 2013*, UNODC and Ministry of Interior and Narcotics Control, Government of Pakistan.

According to the 2006 National Assessment Survey, conducted by UNODC, there were around 628,000 opiates abusers in Pakistan, of which 482,000 were

heroin users. An estimated 125,000 Injecting Drug Users (IDUs) were also identified among the addicts (see Table 2 below).[27]

Table 2

Opiate users in Pakistan, province-wise

	Prevalence of Opiate Use (*Percentage of Population*)	**Prevalence of Opiate Use** (*In Number of Users*)	**Injecting Drug Users Prevalence** (*Percentage*)	**Injecting Drug Users** (*In Number of Users*)
NWFP	0.7	90,000	0.06	8,000
Punjab	0.4	200,000	0.2	100,000
Sindh	0.4	87,000	0.2	44,000
Baluchistan	1	45,000	0.1	4,500
Pakistan	0.7	628,000	0.14	125,000

Source: 'Illicit Drug Trends in Pakistan', UNODC, April 2008, p.15.

The annual prevalence showed in the above table has risen to 1.0 per cent from 0.7 per cent due to which there are currently 860,000 or 0.8 per cent regular heroin users and 320,000 or 0.3 per cent opium users. Combined there are 1.06 million opiate users in the country, according to UNODC's Drug Use in Pakistan 2013 Survey.[28] Highest prevalence of both heroin and opium users are found in the provinces of Balochistan and KPK. It is estimated that 1.6 per cent of the whole population of Balochistan is opiates abuser, while in KPK it is around 7.2 per cent of the whole adult population for opioids and opiates.[29] The Injecting Drug Users (IDUs) prevalence has also increased. It is estimated that 28.8 per cent of the people who injected drugs in the Southwest Asia are living with HIV, reflecting the high prevalence of HIV among the IDUs in Pakistan. China, Russian Federation, the United States, and Pakistan, account for around 62 per cent of the global total of IDUs living with HIV. There are currently, 430,000 IDUs in Pakistan. Among those 430,000 addicts, around 73 per cent are reported to be sharing syringes. Punjab, due to large population, has the largest number of substance abusers and IDUs, around 2.9 million and 260,000, respectively. In Sindh, an estimated 570,000 people used opioids in the 2012.[30] The situation in India is not good at all. There are between 0.18 million to 1.1 million IDUs in the whole country. It was first concentrated in north-east of the country, but rapidly growing in Punjab (as stated above) and other states in north-west. Female and male ratio is 20 and 80 per cent respectively. Sixty-six per cent of females (out of 20 per cent of total IDUs) are found engaged in sex

work in exchange for drugs in India.[31]

Cannabis

Cannabis is also very popular and widely used in India. The way coca plant was sacred to the Andeans, the cannabis plant also has religious cosmology for the Indians. It is mentioned in the Hindu text, the Vedas. In the year 2000, estimated number of cannabis abusers in India was 2.3 million or some 3 per cent of the whole population. According to the International Narcotics Control Board India Report 2005, there were approximately 8.7 million cannabis abusers in the country though.[32] Like poppy, it is also illicitly cultivated in the states of Jammu and Kashmir, Himachal Pradesh, Uttar Pradesh, Andhra Pradesh, Tamil Nadu, Kerala, and Manipur. It is used in India as well as in Pakistan in three forms: Bhang, Ganja, and Charas. Bhang is composed of matured leaves; Ganja is derived from the flowering top of the female plant, while Charas is the resinous exudation secreted by the leaves, young flowers and fruit of the female cannabis as well as bark of the stem. Ganja and Charas are usually smoked and Bhang is drunk after processing. Bhang usage is a well-established social custom in many parts of East and North India, while Ganja smoking is rampant in the Uttar Pradesh and Bihar.

Cannabis in Pakistan is popular and common too; around 3.6 per cent of the whole population is addicted to cannabis (which is higher than India according UNODC estimates).[33] The reasons of its popularity are low price and easy availability. Charas is the most prevalent form of cannabis used in Pakistan. Bhang usage is also very common. The cannabis plant grows wildly in many parts of the country, particularly in mountainous northern tribal areas of Pakistan where it is openly sold in the bazaars. Although it is illegal in Pakistan, its possession is not penalized, except in the regions such as Islamabad, and Lahore. Like opium, most of the cannabis is trafficked to Pakistan through Afghanistan, but it tends to be processed in Orakzai and Kurram agencies of Pakistan. Geographically, these areas are complex and inaccessible. From these areas, it is then transported by caravan throughout the border areas of KPK to reach Balochistan, where it is trafficked out of Pakistan via Makran Coast and Karachi seaport.[34]

Apart from the traditional organic drug abuse in India and Pakistan, the synthetic drug abuse is also on the rise. It is increasingly replacing the traditional usage. The worldwide shift in patterns of drug abuse is the catalyst behind this drive. One of the main reasons for the surge in synthetic drugs abuse is that it is less expensive and easily made. The following section will describe the emerging trends in patterns of drug abuse worldwide in general and in India and Pakistan in particular. The main purpose of highlighting emerging trends is two-pronged: to draw attention towards this emerging class of drugs, and to infer recommendations for formulating effective policy against the illicit drug menace.

Emerging trends: Implications

Synthetic drugs are chemical-based drugs. These are designed to

achieve similar effects as of marijuana and cocaine but they are not derived from cannabis plant or coca bush. With the inclusion of different chemicals, their effects on the body are more severe than marijuana and cocaine, including severe paranoia, self-mutilation, hallucinations and elevated heart rate. It is important to note here that mostly, the consumer does not exactly know the chemicals used in these drugs, which compounds the health risk. Cannabis-based synthetic drugs are called Cannabinoids, while cocaine-based are called cathinones. Former is best known as K2 or Spice, while the latter is known as Bath Salts. In 2011, in the United States alone, there were around 28,531 emergency room visits of cannabinoid-affected patients. According to the latest estimates by UNODC, the worldwide organic (plant-based) drugs markets are stable or declining, while the synthetic drugs abuse is increasing. Apart from cannabinoids and cathinones, Fentanyl usage is also on the rise. It is a powerful synthetic opiate. It is more potent than morphine (derived from opium). To enhance its potency, it is usually mixed with local heroin or cocaine that makes both extremely injurious to health. Recently, the United States and Canada have issued warnings against Fentanyl, as a number of deaths have been reported due to its usage. Another homemade cheap but more potent substitute of heroin is Krokodil, extensively used in Russia. It gets its name from the scaly skin that forms at injection site. E-cigarettes are also getting popularity worldwide. It is a battery operated device used as an alternative to traditional smoking. It is also found in India and Pakistan, however, its usage is negligible. E-cigarettes deliver nicotine, which is highly addictive.

The Amphetamine-type Stimulants (ATS) market is also booming. ATS refers to the group of drugs that include amphetamine, methamphetamine, methcathinone, fenetylline, ephedrine, and 3,4-methylenedioxy-methamphetamine (MDMA) also called Ecstasy or Molly. ATS is rapidly gaining popularity because of its affordability. It is also convenient in use. For instance, taking pills avoid the hassle of injection and smoking. ATS is often associated with modern lifestyle as well. A significant surge of ATS was observed in North America, particularly Canada, and in the East and Southeast Asia, particularly in Myanmar. More than 94 million pills were seized in the year 2009 in Southeast Asian region. The seizures were around 32 million pills in 2008. From Myanmar, it is being trafficked to Thailand, and Laos. ATS, mostly methamphetamine is reported to be trafficked to Asia and Oceania through Iran. Turkey also reports that the methamphetamine in the country is smuggled from Iran and then trafficked further to East and Southeast Asia by air. ATS is also expanding in Europe. This shifting trend in pattern of drug abuse has also been observed in Afghanistan. In a country like Afghanistan, one can surely expect to find drugs like opium, hashish, and heroin but the situation is somewhat changing with the advent of ATS (methamphetamine). In 2008, the first methamphetamine seizure was reported of around four grams. Currently seizures have increased sharply to some 17 kilograms in 14 provinces out of the country's 34. Recent seizure data reveals that two types of methamphetamines are being used in the country: first is the crystal meth (called Shisha in Dari that means 'glass pane') and the second is tablets. Former is seized mostly in the

western Afghan provinces of Herat, Farah, and Nimroz (probably originating from neighbouring Iran) while the latter was captured in Kabul and Kunduz (probably trafficked from Central Asia). According to Dr. Khalid Nabizada[35] the rate of methamphetamine samples analyzed in the laboratory of Counter Narcotics Police of Afghanistan (CNPA) is increasing gradually. In 2011, only 16 samples were analyzed. In 2012 and 2013 it rose to 99 and 93 samples, respectively. In 2014, around 146 cases were tested positive for methamphetamine, and they stood at 206 in 2015.[36] According to the Afghan National Drug Survey 2015, there are between 70,000 and 90,000 ATS users in the country. The ATS use is relatively very low as compared to opiates, but its gradual rise is not only alarming for Afghanistan itself but for the neighbouring countries as well.

In this grim scenario, South Asia is highly at the risk. Recent reports claim that the region is affected by methamphetamine trafficking taking place in Southeast Asia and Central Asia via Afghanistan. India and Pakistan, both are vulnerable to these trends as India is having some of the largest chemical industries in the world. It exports ephedrine and pseudoephedrine. Both chemicals are used in manufacturing of methamphetamine. In 2003, the first known illicit ATS laboratory was dismantled in Kolkata. Similarly, in 2006 another laboratory was seized in Hyderabad. In 2009, India seized 1.2 metric tonnes of ephedrine. In 2010, two more laboratories were discovered and a large amount of ephedrine and pseudoephederine was seized. The country is reported to have become a significant source of Ketamine (legally manufactured in India). It is smuggled to East and Southeast Asian markets. It is often sold as Ecstasy in these markets.[37]

Pakistan on the other hand is a known destination and transhipment hub for precursor chemicals such as: acetic anhydride, ephedrine, and pseudoephedrine. It is amongst the countries that had the highest estimates of pseudoephedrine, according to the 2011 ATS survey. In global comparison for legitimate ephedrine requirement, Pakistan is ranked fourth largest country in the world. Its legitimate requirement has reached 22,000 kilograms, behind China, United States, and Republic of Korea. According to the 2006 National Assessment Report on Problem Drug Use in Pakistan, only two types of ATS were reported to be used in 2006, Ecstasy and benzodiazepines. Former is smuggled, as mentioned above, and the latter is either imported or locally manufactured. Its availability and affordability is now in the range of the common man as similar kinds of locally made pills are also available in the black market. As mentioned above, mostly the abusers do not know the kinds of chemicals used in the preparation. Dearth of drug-testing facilities in both India and Pakistan, further add to the worries. Already grappling with endemic organic drug abuse, the rise of synthetic drugs in India and Pakistan is certainly posing serious challenges for illicit drug control. There is a dire need to initiate awareness campaigns about the dangers of these chemicals to avoid their misuse.

The surge of synthetic drugs use is grave and alarming. Comprehensive policy with an effective implementation to curb the prevalent and emerging

illicit drug menace is necessary. It is observed that Indian and Pakistani authorities are more concerned with opiates (heroin and opium) and cannabis (hashish or charas). Much of the focus is on the seizure of illicit drugs; however, no strict measures are being taken to control synthetic menace and rampant prescription abuse in both states. There is a need to establish drug-testing facilities, so that actual types and trends of ATS can be determined.

The addicts on the other hand, are maligned and considered untouchables in the society, and their rehabilitation has never been a priority. In Pakistan, KPK and Balochistan are reported to be highest drug-dependent provinces. Special attention is required to deal with this issue and to provide long-term treatment and care for drug dependents. Similarly, in Punjab the injecting drug users are comparatively higher, posing serious health problems not only for themselves but for their family members and the society as well. Cocaine use is negligible (around 2,300 people used cocaine in the year 2012, particularly in Azad Kashmir and some limited number of its abusers were reported to be treated at Modern Addiction, Treatment and Rehabilitation Centre (MATRC), Karachi. Its presence in the region is a matter of serious concern though. In India, injecting drug use is rising. The country is a large manufacturer of pharmaceuticals and it is observed and reported that IDUs are closer to the abuse of licit pharmaceuticals than to illicit. This pharmaceutical drug abuse is the catalyst behind the surge of IDUs and HIV/AIDS patients in the country.

Hardly, any government-sponsored institute provides complete rehabilitation facilities to drug addicts. Mostly non-governmental organizations and private institutes within their limited resources are performing this job. State intervention in this regard is highly required. Moreover, it is suggested that drug education should be included in school syllabi and teachers, doctors, social workers, and community health workers should be trained in a manner to provide early remedial action. Both states also need to strengthen counter narcotics surveillance on borders.

Annexure

Schedule I, II, III, IV and V drugs

Schedule I: A highly addictive drug. It has no safe, accepted medical use in the United States (US), such as heroin, marijuana, LSD, PCP, and Crack cocaine

Schedule II: A highly addictive drug, but has safe and accepted medical use in the US. These drugs can cause severe psychological or physical dependence. These drugs include certain narcotic, and stimulant and depressant drugs. Some examples are morphine (Percodan), methylphenidate (Ritalin), dextroemphetamine (Dexederine), oxycodone and cocaine.

Schedule III, IV or V: These are addictive but less than Schedule II. They have safe and accepted medical use in the US. These drugs include those containing smaller amount of narcotic and non-narcotic drugs, anti-anxiety drugs, tranquilizers, sedatives, stimulants and non-narcotic analgesics. Examples include acetaminophen with codeine (Tylenol No.3), paregoric, hydrocodone with acetaminophen (Vicodin), diazepam (Valium), alparzolam (Xanax), propoxyphene (Darvon), and pentazocine (Talwin).

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INDIA'S EVOLVING STRATEGIC MARITIME THOUGHT: BLUE WATER ASPIRATIONS AND CHALLENGES

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About blue water navy

Like the term 'terrorism' there is no universally accepted definition of a 'blue water navy'. However, there exists a broad consensus amongst scholars who describe it as specific naval 'means' along with the 'ability' to perform. Put simply:

"It refers to the ability of a navy to sustain a broad range of maritime operations across the open ocean. A blue water navy is the one able to operate in blue water, and thus beyond the coastal or littoral regions and beyond the Exclusive Economic Zone (EEZ). In practice, the term 'blue water' tends to apply to those navies with a balanced range of capabilities to operate across the open oceans. Such navies usually have the capacity of sea control and sea denial as well as power projection at great ranges and across deep water, and are also able to sustain these operations. A blue water navy allows a country to project power far from home and usually, but not necessarily, includes one or more aircraft carriers. Smaller blue water navies are able to dispatch fewer vessels abroad for shorter periods of time."[1]

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Sea power

At a conceptual level, sea power is one facet of state power, used for safeguarding and pursuing any nation's vital interests in dealings with other countries.[2] According to Alfred T. Mahan, the intellectual father of the US navy, a nation's potential for sea power is the function of the following conditions:[3]

- Geographic position
- Physical conformation
- Extent of territory
- Number of population
- National character
- Character of the government

Sea power of a nation stems from its maritime potential. The navy of a country is the expression of its sea power. Complementing this nautical military power are the physical, geographic, and demographic features, as well as economic resources derived from or related to the sea, all of which are used in furtherance of national interests.[4]

Sea power accordingly involves military and civil maritime capabilities of a nation.[5] The expression is not only about what it takes to use the sea but also the capacity to influence behaviours of people, things, or events ashore by what one does at or from the sea. Sea power, however, is a relative concept with some countries having more than the others. This could be in the shape of naval strength, ship-building industry, manpower reservoir of seafarers, marine resources, off shore mercantile marine assets, or a combination of all these characteristics.[6]

Between Mahan and Corbett

For Mahan, amassing sea power meant more than raising and deploying navies or driving enemy fleets from the high seas. Writing in the 1890s, Mahan portrayed sea power as resting on 'three pillars' represented by international trade and commerce, naval and merchant shipping, and overseas bases. His contemporary Sir Julian Corbett—who scoffed at Mahan's work terming it 'shallow and wholly unhistorical'—preferred the term 'maritime', which carried both military and non-military connotations to the term 'naval', more common in Mahan's writing, despite his avowedly broad conception of sea power.

A maritime power, an expression used today for certain countries, implies a "naval power with a strong mercantile element."[7] It must, however, be understood that the term, maritime power does not only involve the 'naval and mercantile capacity' but the 'political will' to influence events in the maritime domain well beyond a nation state's territorial waters or even beyond its exclusive economic zone (EEZ). The term is thus an amalgam of both the 'capability' and the 'political will'.[8]

Distinctly larger concept

Sea power is a distinctly larger concept than land power and air power. The term embraces the geo-economic dimensions of human activity which are neither covered by land power nor air power.[9] Unlike the army or the air force,

whose size and firepower have to be related to that of potential adversaries, the size of navy is determined by the quantum of maritime assets and interests that a nation has to safeguard.[10] Sea power can be seen as a tight inseparable system in which naval power protects the maritime assets and trade, which are the ultimate source of a nation's prosperity and military effectiveness.[11]

As sentinels of the sea, navies at once protect, preserve, and advance a nation's maritime interests. Navies are also a powerful arm of any country's foreign policy besides being the instrument of diplomacy. They are uniquely placed to defend trade and their optimum utility is in time of peace. Investment in navies structured along systemic lines promises a massive return in the form of an extended and improving peace and prosperity.[12] While naval forces can be used to threaten an adversarial state's security, at a fundamental level sea power is relatively benign. Naval forces can generate security without threatening others' political or sovereign survival as may be the case with the intervention of ground forces.[13]

Emerging maritime order in the Indo-Pacific region

The international system is currently undergoing a momentous maritime shift. This transition is symbolized by two parallel unrelated events: the retreat of European states from the sea and the entry of Asian states into the oceanic arena.[14] The noted world historian Paul Kennedy points to a "remarkable global disjuncture" involving "massive difference in the assumptions of European nations and Asian nations about the significance of sea power, today and into the future."[15] He notes that Western capitals, with the exception of Washington, appear ready to abdicate their status as maritime powers, while Asian leaders seem eager to expend national treasure on building up their navies. As Kennedy readily concedes, the global implications of this apparent divergence are far from clear at the moment. The regional phenomenon in Asia, where closely clustered fleets of navies are growing at fairly rapid rates nearly simultaneously, raises some intriguing and troubling questions though.[16]

Be that as it may, international maritime security analysts now have consensus on one issue: the Indian and Pacific Oceans will witness an increasing contest for military dominance over the coming decades. In the past century, major Asian powers including China, Japan, and Russia repeatedly tried and failed to dominate their nautical environment militarily. The US navy succeeded in this role in the Pacific following the Second World War.[17] However, with major 21st century rising economies lying on the shores of Asia-Pacific and much of their energy needs being shipped from the Indian Ocean, the security landscape is speedily reshaping. The Asian waters promise to be the geostrategic locus of international politics in the 21st century. In the past two decades, more and more Asian countries have accordingly turned to sea.

The strength of navies in the Asia-Pacific region has increased in an unprecedented manner over the past two decades. Economic growth has swelled budgets, and navies have claimed a growing share of national expenditure to acquire new vessels and capabilities.[18] The US-based naval consultancy firm

AMI International anticipates a naval spending in the Asia-Pacific of some US$170 billion by 2030.[19]

Table 1

Growth in Fleet Size - 2012

	US (Pacific Fleet)		China		India	
	Hulls	**Tonnage**	**Hulls**	**Tonnage**	**Hulls**	**Tonnage**
Ballistic missile-firing nuclear-powered submarine (SSBN)	8	152,000	4	32,100	0	0
Guided missile-firing nuclear-powered submarine (SSGN) / general purpose fast attack nuclear-powered submarine (SSN)	33	261,200	5	29,000	1	9,250
Diesel electric-powered submarine (SS/SSK)	0	0	55	142,900	14	38,600
Aircraft carrier (CV) / nuclear-powered aircraft carrier (CVN)	6	600,000	1	59,500	0	0
Support aircraft carrier with helicopters (CVS/H)	0	0	0	0	1	29,100
Pacific aerial surveys (PAS)	10	318,300	2	37,000	1	17,500
Cruiser (CC) / Destroyer (DF) / Frigate (FF)	59	487,300	75	266.000	22	110,200
Fleet Services (FS)	0	0	0	0	24	20,000
Total Subs	**41**	**413,200**	**64**	**204,000**	**15**	**47,850**
Total Surface	**75**	**1,405,600**	**78**	**362,500**	**48**	**176,800**
% Change 2000-2012	**8**	**6**	**-2**	**31**	**-6**	**10**
	6	**9**	**30**	**130**	**20**	**40**

Source: 'Asia's Naval Expansion–An arms race in the making?', IISS London, 2012, p. 35

Naval arms race is usually thought to increase the prospects for conflict. Rapidity in arms procurement and action-reaction dynamics may be necessary conditions for an arms race, but they are not sufficient. There also needs to be an intention, real or perceived, to use these increased capabilities against other states. The interstate disputes and tensions in Indo-Pacific Oceans could worsen by contests over islands, territory, and scarce resources including minerals and fisheries. The region's energy demand has also been rising by 3-5 per cent annually for the past 20 years and is higher than new supplies could be located.[20]

A2/AD vs Air-Sea Battle

Since the end of Cold War, the US navy and Marine Corps jointly produced a series of concepts, which brought them back to the centre stage of the US foreign policy. With the end of perceived tangible threat from the Soviet Union and classical Mahanian clash of forces on the high seas (or open ocean warfare challenge), the United States navy shifted focus to crisis-response and intervention in the Third World littorals. This led to emergence of new terms like 'littoral warfare' and 'expeditionary forces'.[21]

All these concepts were based on the premise that command of the littoral seas and the skies above from where power could be projected into areas of interest would vest with the United States forces. The phenomenal rise in China's economic clout and parallel increase in military muscle, particularly the PLA Navy, has now raised several questions about the unchallenged maritime supremacy of the United States. The US primacy in gaining access to areas of

interest can no longer be taken for granted. Nor can the US maritime power be projected, any more, with impunity.[22]

In this context, two new operational concepts have emerged. Attributed to China, the terms 'anti-access' and 'area denial' are often combined to produce the abbreviation A2/AD. The former refers to actions and capabilities designed to prevent an opposing force from entering an operational area. 'Area denial' on the other hand refers to those actions and capabilities which will limit the freedom of action of an opposing force that has already entered the operational area.[23] China's centrepiece in the current strategic calculus is DF-21D—a precision-guided, land-launched, anti-ship ballistic missile designed to reach surface targets at ranges greater than 900 nautical miles. Beijing is pursuing a missile-centric strategy with the purpose of holding US aircraft carriers at high risk if they operate in China's near seas, thereby hindering their access to those waters in the event of a crisis.[24]

Regardless, with the much touted US 'rebalance' or 'Asia pivot' policy having been announced in January 2012, and expanded upon at the Shangri-La Dialogue in June 2012, the sense of a competitive military relationship between China and the US has grown. The 'rebalance' has at its heart, the development of an operational concept known as 'Air-Sea Battle', which aims to deter, defeat, and disrupt 'anti-access' and/or 'area denial' capabilities. Although the US navy emphasizes that this is a concept and not a strategy and is not specifically aimed at China, it is widely seen as an American reaction to the development of China's asymmetric naval capabilities typified by submarines, anti-ship missiles, and small attack craft that seem designed to undermine the US Navy's substantial military advantages.[25]

The practical, immediate effect of Air-Sea Battle—which aims to develop networked and integrated aerial and naval forces to assure access against an adversary—will be to increasingly disperse US forward-deployed forces throughout the region, complicating China's ability to prevent their entry into a theatre (anti-access) and their freedom of movement once there (area denial). These developments reflect the burgeoning bilateral military rivalry developing between China and the US, even while their trade relationship continues to develop and deepen.[26]

The newest dimension: The China-Pakistan Economic Corridor

The recently concluded US$46 billion China-Pakistan Economic Corridor (CPEC) has caused considerable anxiety in New Delhi and Washington. The lynchpin of the project is Pakistan's port of Gwadar. Situated on the western fringes of Pakistan's Makran coast in Balochistan province, the port circumvents and significantly reduces China's strategic dependence on the Strait of Malacca. It also promises to open new vistas of trade for China through Pakistan's port. Gwadar will considerably reduce the distance for China to reach Europe, Middle East, and Africa by circumventing the Malacca Strait route.[27] The project, a network of road, rail, and sea routes, will simultaneously open wide ranging business and economic prospects in China's western province of

Xinjiang and Pakistan's restive Balochistan province. The project's key western alignment from Gwadar to Khunjerab covers nearly 2,653 kilometres (km). Some 1,000 km or 40 per cent of this network rests in Balochistan while 25 per cent (600 km) rests in KP province.[28]

In a survey carried out by the Americans in the early 1950s, Gwadar was declared as a natural warm and deep water port. It is a hammerhead shaped peninsula protruding at the apex of the Arabian Sea and at the mouth of the Persian Gulf. The port is just 180 nautical miles (nm) from the strategic Strait of Hormuz, and 405 nm and 76 nm from the Iranian ports of Bandar Abbas and Chabahar, respectively.[29] Government of Pakistan purchased Gwadar from the Sultanate of Muscat and Oman for US$3 million on 9 September 1958 after negotiations that lasted four years.[30]

Perturbed with the possible consequences of the CPEC, India has accelerated previous development work at Chabahar port. Located close to Gwadar port, Chabahar is a free trade zone port on the Makran coast of Sistan and Balochistan province of Iran. The port will provide India access to oil and gas resources of Iran and Central Asian states. New Delhi has already spent US$100 million to construct a 220 km road from Afghanistan's Nimroz province to this port. Chabahar provides India an easier land-sea route to Afghanistan.[31]

The two ports in the Arabian Sea, one in Iran and the other in Pakistan, demonstrate the emerging contest for power in the Western Indian Ocean. India fears that the location of Gwadar will allow Pakistan and China to exercise control over the world's most vibrant energy route and a facility to monitor naval activity in the Persian Gulf and the Arabian Sea. Bulk of India's energy supplies transit via Hormuz. In this backdrop, India feels encircled and checkmated on land and seas by the China-Pakistan alliance. All along its western border, just a few hundred kilometres away, operates CPEC rattling the omni-presence of China-Pakistan alliance extending all the way to waters along its coast lines which renders its lands and shores vulnerable.[32]

Indian strategic thought and *Arthashastra*

Chanakya Kautilya or Vishnugupta (300 BC) was a Hindu statesman and philosopher. Born into a Brahman family, Kautilya received his early education in Taxila (Pakistan). He is known to have had knowledge of medicine and astrology, and believed to be familiar with elements of Greek and Persian learning introduced into India by Zoroastrians. Kautilya became a minister and an adviser to Chandragupta (321-297 BC), the founder of the Mauryan Empire of northern India. He was instrumental in helping Chandragupta overthrow the powerful Nanda dynasty. Kautilya wrote a classic treatise, *Arthashastra* (The Science of Material Gain).[33] The book came to be the principal guide for Chandragupta.

Written in Sanskrit, the *lingua franca* of his times, *Arthashastra* contains 15 sections. As a manual of statecraft, *Arthashastra* records the strategic and foreign policy practices. To Kautilya, diplomacy, statecraft, administration of the state, and the art of warfare were matters of vital

importance requiring study, scientific analysis, and intelligent application.[34] Every situation demanded perceptive approach and solution, which could be obtained through one of the stratagems or a combination of them: the *Sam* (conciliation or treaty), *Dam* (reward or money), *Dand* (punishment), and *Bhed* (dissension). The outcome of any strategic manoeuvre in Kautilya's estimate was to result in victory.[35]

Arthashastra encompasses a world of practical statecraft, not philosophical disputation.[36] The work sets out, with dispassionate clarity, a vision of how to establish and guard a state while neutralizing, subverting, and (provided opportune conditions) conquering the neighbours. For Kautilya, power was the dominant reality. It was multidimensional and its factors were interdependent. All elements in a given situation were relevant, calculable, and amenable to manipulation towards a leader's strategic aims. Geography, finance, military strength, diplomacy, law, agriculture, cultural traditions, morale and popular opinion, rumours and legends, and men's vices and weaknesses needed to be shaped as a unit by a wise king to strengthen and expand his realm—much like a modern orchestra conductor shapes the instruments in his charge into a coherent tune.[37]

Millennia before European thinkers translated their facts on the ground into a theory of balance of power, the *Arthashastra* set out an analogous and more elaborate system termed the 'circle of states'. Contiguous polities, in Kautilya's analysis, existed in a state of latent hostility. Whatever professions of amity he made, any ruler—whose power grew significantly—would eventually find it to be in his interest to subvert his neighbour's realm. This was an inherent dynamic of self-preservation to which morality was irrelevant.[38] In *Arthashastra*, the purpose of strategy was to conquer all other states and to overcome such equilibrium as existed on the road to victory.[39] More than ever before, *Arthashastra* today is the bible—the guiding spirit—of the Indian strategic community.

Naval warfare and *Arthashastra*

In what way will the Kautilyan worldview apply to the oceans is not much clear. Naval combat goes unmentioned in the *Arthashastra*. But K.M. Panikkar, India's astute pre-independence geopolitical thinker and a celebrated diplomat who remains a fixture in Indian strategic discourses, quotes Kautilya on the extent of the empire: "It should span the earth." Panikkar, however, also points out that for the Mauryan strategist, 'the earth' is the subcontinent, not the entire globe. Universal empire is thus confined to the Indian Landmass, remaining within the frontiers set by the Indian Ocean and the northern mountain ranges. On what should happen beyond those frontiers, *Arthashastra* is silent.

Do the expanses washing Indian shores fit into Kautilya's *mandala* (the system of developing, maintaining, or sustaining favourable contacts with other states) and thus into Indians' mental map of their geographic environs? Absent neighbouring states with defined boundaries, what would the circle of states look like at sea? Would it conform to the law of the sea, which partitions the

oceanic domain into territorial sea, exclusive economic zones and the high seas? Or would it depend solely on each coastal state's naval power and thus its naval reach in the Indian Ocean? If so, the system's geometry would fluctuate with other measures of national power, adding complexity to the *mandala.*[40] Regardless, under the incumbent Indian Prime Minister Narendra Modi, whose views on Hindutva and fascist leanings are an open secret, an aggressive policy in the Indian Ocean is now surfacing rapidly.

The Indian Ocean under Modi

Panikkar was the most forceful proponent of Indian claim over the entire Indian Ocean. In his well-known treatise *India and the Indian Ocean* published in 1945, Panikkar makes a long-drawn case and touts why the Indian Ocean should remain 'truly Indian'. Not only that, he rejects pacifism and *Ahimsa*. "It is not for *Ahimsa* and pacifism that Ramchandra stands in Indian religion: it is for active assertion of what is morally right. Nor does Krishna stand for non-violence. 'Wake, be thyself, scourge thy foes' is the main teaching of Gita."[41] According to Panikkar, the Hindu theory at all times, especially in the periods of her historic greatness was one of active assertion of the right, if necessary through the force of arms.[42] It would not be wrong to assume that Kautilya's *Arthashastra* and Panikkar's *India and the Indian Ocean* will be the chief inspiration and powerhouse in guiding New Delhi's policy on Indian Ocean under Prime Minister Modi.

With the United States strategically backing India, Modi government has gone into an overdrive to accomplish its goal of regional domination. Contrary to the previous United Progressive Alliance (UPA) government of Manmohan Singh, the Indian Ocean and its littorals are on top of New Delhi's policy under Modi.[43] The current diplomatic drive goes hand in glove with covert operations to destabilize regional countries, establish strategic military outposts in Indian Ocean islands, and an ambitious fast-paced expansion and modernisation of the Indian navy.

In March 2015, Prime Minister Modi took a whirlwind tour of Indian Ocean islands covering Mauritius, Seychelles, and Sri Lanka. It was a move designed to further India's longstanding desire to convert Indian Ocean into its sphere of influence.[44] Coming on the heels of President Obama's visit to New Delhi, Prime Minister Modi while in Mauritius could hardly conceal his government's intent to shape the security environment in the Indian Ocean. To the applause of India's foreign policy and security analysts, soon after commissioning India's first export warship, a 1,300 tonne patrol vessel Baracuda, he contended, "she [Baracuda] will be there to help in times of disaster and emergencies. But she will do more than that. She will also help make our Indian Ocean safer and more secure."[45] Mauritius, a strategically located island in the Indian Ocean has a vast 2.3 million square kilometres Exclusive Economic Zone. A base in the island effectively means India will have enormous strategic and military leverage against China and Pakistan.[46]

While in Seychelles, Modi laid out a fivefold framework for India's engagement with the Indian Ocean littorals. It includes securing India's

mainland and island territories, deepening security cooperation, building multilateral cooperative maritime security, sustainable economic development, and discarding India's longstanding reluctance to cooperate with other major powers in the Indian Ocean. In both Seychelles and Mauritius, Modi won agreements to develop infrastructure in the two islands that could also serve as military outposts.[47]

There is little doubt that Modi has taken a decisive break from the ambivalence of UPA government. It has come up with a crystal clear policy to dominate the Indian Ocean and its island territories, no matter what it takes.[48] Providing perpetual strength to Modi government's resolve is the US defence policy (the Asia pivot) that declares India as a "regional economic anchor and provider of security in the broader Indian Ocean region."[49] If there was ever to be a truly determined drive to realize Panikkar's dream, it would perhaps be in the watch of Prime Minister Modi. Championing a domineering adaptation of puritanical Hinduism and drawing from sacred scripture Bhagvad Gita alongside the epic Mahabharata—the latter promoting war to exact revenge for injustice irrespective of blood necessary to be shed—this should come as no surprise. The denial of exclusive ownership of the Indian Ocean as deemed by New Delhi could be interpreted as injustice in this case.[50]

Challenges

Between aspirations and reality—the void

Any state that has both the 'capability' and the requisite 'will' to become a maritime power will almost certainly cast an impact on other coastal states. This could either be because of the coastal state's freedom in the use of the seas for own purpose or because of the aspiring power's ability to project power into the littorals. Maritime power and by extension maritime strategy is a tool of grand strategy that serves the ends of national security. It is hence natural for the maritime power to contribute to the accomplishment of national security objectives.[51]

Indian Ministry of Defence website lists seven national security objectives.[52] Founded on national interests, these objectives are summarised in the Indian Maritime Doctrine as follows:[53]

- Ensure security of national territory, territorial space, citizens, resources, and maritime trade routes;
- Maintain a secure internal environment to guard against threats to national unity, core values, and development;
- Strengthen cooperation and friendship with other countries to promote regional and global stability;
- Maintain a strong and credible defence posture, and capability to safeguard the national aim and interests.

Eminent scholars on Indian national security posit that the Indian grand strategy is premised on three concentric geographic circles: The inner most circle consists of India and its 'immediate neighbourhood'; the second or middle geographic circle consists of the so-called 'extended neighbourhood'; while the

third circle constitutes 'the rest of the world'.[54] This construct is echoed in the Indian Maritime Military Strategy, the military dimension of India's maritime strategy, which aims to synergise all aspects related to maritime activities.[55] The clear manifestation of inner most circle is the South Asian Association for Regional Cooperation (SAARC). Four of the total eight members (Bangladesh, Maldives, Pakistan, and Sri Lanka) represent the adjoining maritime domains of India. Myanmar is not a member but India can bring maritime power to bear on it.

Analysts hypothesise that India's two goals in the inner circle are to seek primacy and to exercise a veto over actions seen as infringing on its interests. Primacy connotes to India's ability to impose its 'will', significantly influencing the actions of others.[56] The manner in which this primacy is likely to be exercised is articulated in Chapter 7 of the Indian Maritime Military Strategy for Employment, wherein New Delhi envisions conducting sea control and sea denial operations in wartime before taking part in joint operations. By supporting land and air forces, the navy would contribute directly to victory. As the Maritime Military Strategy notes, this would involve operating in enemy littoral zones.[57]

At the moment, however, India lacks the power-projection forces and lift potential to execute significant joint operations outside its immediate neighbourhood. Leaving aside Bangladesh and Sri Lanka, Pakistan remains the only neighbour with adequate potential to contest for control over Indian territorial waters. In the medium to long term, as China's naval capabilities expand, India may confront another challenge to its home waters.[58]

The second goal, that is, to veto detrimental actions by outside powers in India's immediate environs, has a distinct maritime dimension. India—and more precisely the Indian navy—carries the burden of history. During the 1971 war with Pakistan, the United States moved its carrier battle-group USS Enterprise into the Bay of Bengal. The move was seen by New Delhi as intimidating gunboat diplomacy.[59] It has left an indelible imprint on the Indian security mind, despite the fact that today the two navies are the closest allies.

Instead, New Delhi now fears PLA Navy as a contender. In no uncertain terms, the Indian Maritime Military Strategy predicts: "Chinese navy is set on the path to becoming a blue water force. It has an ambitious modernization programme. Notable amongst those are the renewed interest in aircraft carrier programme, the nuclear submarines, and the ballistic cruise missile projects along with attempts to gain a strategic toehold in the Indian Ocean region."[60] A military mission envisioned by Indian navy in the Indian Maritime Doctrine is to exercise sea control at the entry/exit points of the Indian Ocean region. Performing this mission would be a prerequisite for India to block Chinese ingress in the Indian Ocean or in other words, shutting China out of India's immediate neighbourhood. For now, however, this, at best, is an aspiration than a reality.[61]

The second or middle geographic circle consists of the so-called 'extended neighbourhood'—a rather amorphous area containing a significant amount of ocean expanse. Accordingly it could encompass the rest of

continental Asia (beyond the immediate neighbourhood) as well as the Indian Ocean littoral. Again, it remains questionable as to how India would wield power to protect its interests in this large continental and maritime expanse when hostility towards Pakistan drains so much of its resources.[62] The fiscal year 2015-16 Indian budget presented by the Modi government in February 2015 set aside US$40.4 billion for defence, showing an increase of 7.7 per cent over the previous year. While army accounts for 53 per cent of total defence budget, the share of air force and navy is 23 and 16 per cent, respectively.[63]

Despite the fact that Indian military acquisitions and posture is chiefly oriented towards Pakistan,[64] Chinese navy's advances in the Indian Ocean continue to rattle Indian strategic mind. As recently as June 2015, Indian media reported that a conventional type 039 Yuan class diesel electric-powered submarine with a crew of about 65 docked in Karachi harbour.[65] Equipped with torpedoes, anti-ship missiles, and air-independent propulsion that dramatically enhances the submarine's underwater endurance, it was neither the first nor going to be the last in the Indian Ocean. A Song class diesel electric-powered attack submarine docked in Colombo port in September 2014 greatly irking New Delhi.[66] China had previously indicated that its Type 093 Shang class nuclear-powered attack submarines would commence patrolling in the Indian Ocean, which Delhi sees as its natural domain. This raised fears in India that China could try to blockade the Indian coastline using nuclear-powered submarines.[67] Given these developments and a less than satisfactory state of its navy, India achieving unchallenged ascendancy in the middle circle is highly debatable.

The third circle, "the rest of the world" envisions India becoming a true world power and a heavyweight in matters of international peace and security. Quoting India's former prime minister Dr. Manmohan Singh, the foreword to the Indian Maritime Military Strategy states, "India's growing international stature gives it strategic relevance in the area ranging from the Persian Gulf to the Straits of Malacca."[68] In continuation, the introduction also echoes India's global interests where Dr. Singh proclaims, "current projections indicate that India will be among the foremost centres of power." He goes on to note that "military power will constitute a critical dimension of India's increased national power."[69] Both Indian prime minister and the epilogue[70] of the Indian Maritime Strategy remind the readers that the primary title of the strategy is 'Freedom to Use the Seas', something deemed critical if India is to realize its potential on the global stage. This 'freedom' obviously should be global in scope. In other words, India must possess both the 'will' and the 'capability' to contribute on the global plane. This requires amassing enough power-projection capabilities to reach beyond the Indian Ocean (farther than Malacca and Hormuz on either side of Indian shores).[71]

At a minimal operational level, this translates roughly into a combat potential to conduct simultaneous and sustained maritime military operations in more than one maritime theatre. A minimum of three carrier battle groups duly integrated with nuclear-powered submarines (SSNs/SSBNs) armed with submarine launched ballistic missiles (SLBMs) concurrently performing

military operations in Indian and Pacific theatres should be the least required force structure. In other words, Indian navy must have the wherewithal, endurance, and operational prowess to conduct sustained operations well beyond the Red Sea in the west and the South China Sea/Pacific in the East. While in the foreseeable future (next 10-15 years)—with the strategic military backing from the United States—India could earn a significant place in the western Indian Ocean and Bay of Bengal, it is exceptionally uncertain beyond those bounds.[72]

Strategic and doctrinal fault-lines

Influential strategists have argued in the past that India had problems in developing a robust security policy, including a strong military force, since the country is "bereft of coherent strategic thought."[73] Much of this is attributed to internal divisions within the society which left a small elite responsible for strategic matters. Former Indian defence and foreign minister Jaswant Singh says that unless India as a society comes together more effectively, it is unlikely to generate requisite military power to pursue an active security policy. Indian scholar Harsh Pant argues that in the absence of strategic thinking, economic growth has become a surrogate for national strategy.[74]

While the Indian navy operates fairly close to Indian shores, its leadership is utterly confused regarding a strategy towards Pakistan or China.[75] The Indian Maritime Doctrine and some previous policy documents do not suggest how Indian naval power could alter the balance with Pakistan or offset China's growing naval capacity. The Indian Maritime Doctrine further does not address how China's increasing forays into the Indian Ocean will be checked. Indian officials speak of the huge gap in terms of budgets and ship numbers between India and China. Others argue that India's advantage will be in advanced technology, not sheer numbers.

The Indian navy is currently the eighth largest in the world with a fleet of some 136 major vessels. It has a target of 200 major platforms in the next 10 years.[76] This includes raising the number of landing platform docks (LPDs) or amphibious assault ships from the current one (INS Jalashwa) to four more.[77] Also included is the plan for indigenous development of six nuclear-powered submarines (SSBNs) and seven stealth frigates.[78]

China, on the other hand, with existing fleet of over 200 major warships is projected to have its navy grow to 351 ships by 2020. This includes an additional aircraft carrier and several cruisers armed with land-attack missiles, besides a number of nuclear-armed submarines (SSBNs). Chinese SSBNs are currently able to patrol with nuclear-armed JL-2 SLBMs, which can strike targets at more than 4,500 nm.[79] Reliable sources indicate that in the next 15 years, the PLA Navy's expansion will include 99 submarines of all types, four aircraft carriers, 102 destroyers and frigates, 26 corvettes, 73 amphibious ships (LPDs) and 111 missile craft.[80] The Indian navy has only 13 conventional-powered submarines and one under-trial nuclear submarine. China already has 51 diesel electric-powered submarines and has now announced that it will put five Type 094 Jin class nuclear-powered ballistic missile submarines into service

in the near future.[81] Indian Maritime Doctrine deals with Pakistan indirectly as one of many littoral threats, and the Indian navy expects to assert control and even project power into enemy land. To what extent this is feasible against a robust Pakistan navy is open to question.[82]

In this backdrop, both Indian and international scholars have roundly criticized Indian navy. They say, "The navy's inability to offer forthright responses to the challenges from China and Pakistan—the nation's primary external security challenges—mars its potential candidacy to be one part of the country's nuclear triad… Navy analysts and their supporters speak and write of a sea based deterrent, yet the inability to articulate a meaningful wartime role reduces the navy's political capacity to bargain for more resources and ultimately hurts its ability to pursue transformation."[83]

The hardware issues

Howsoever put, the early maritime vision outlined by Nehru and Panikkar was sea control which remained at odds with the reality of weak Indian naval capacity until 1971. But following the end of Cold War, the Indian navy became the first of the three services to adjust to geopolitical transformation.[84] Between 1986 and 1996, the Indian navy placed no new orders for principal combatants. During the 1990s it added five Kilo class Russian submarines, one corvette and one tanker. Later during 1997-2000, two more Kilo class submarines and three frigates were added.

The 1994 deal of an aircraft carrier is a tale of horror replete with snags and cost overruns. The handing over of the refurbished 44,500 tonne Kiev class carrier was not only delayed several times but the cost also escalated astronomically. When the final deal was signed in January 2004, the cost of overhaul was estimated to be around US$974 million. By 2007, Russia demanded a cost revision of US$2.3 billion with delivery deadline revised to November 2012. Today, despite being commissioned, the carrier is crippled to the extent where it cannot operate beyond 200nm of mother base at Karwar on the western coast south of Mumbai. Its integral fleet of Mig 29K fighter jets is facing take-off and landing problems and hence the carrier must stay close to shores.[85]

India's indigenously constructed 37,500 tonnes aircraft carrier (IAC) is also a sorry depiction of India's domestic military research and development. During the past two decades, IAC's launch has been deferred on several occasions. In 2011, the then Indian naval chief Admiral Nirmal Verma said that the IAC launch has been deferred from December 2010 to the latter part of 2011 due to shortfall of gearboxes and generators.[86] The IAC is expected to include the Indian naval version of Light Combat Aircraft (LCA) under production with Defence Research and Development Organisation (DRDO). However, despite passage of around five years, the IAC has yet to be formally launched by the Indian navy. Similarly, there have been snags and cost overruns in other major projects as well.

Table 2

India Reveals Major Naval Programme Cost Overruns

Project	Units	Contractor	Date	Cost-overrun (as of 2011)	Original cost estimate
Kolkata (Project 15a) destroyers	3	Mazagon Dock	Started 1986. In service date 2011 to 2014	225%	USD500 million
Shivalik (Project 17) frigates	3	Mazagon Dock	Started 1997. In service date 2010 to 2011	260%	USD450 million
Kamorta (Project 28) Corvettes	4	Garden Reach	Started 2003. In service date 2012 to 2016	157%	USD600 million

Source: 'India reveals major cost overruns', *Janes Defence Weekly*, Vol. 48, No 32, 10 August 2011, pp.21.

The stricken submarine fleet

Indian navy's conventional submarine force is in precarious state. Several Kilo class Russian submarines in Indian naval inventory face technical problems. In 2013, one of the submarines sunk while in Mumbai harbour following an accident on board that caused a huge explosion. Another caught fire at sea in 2014 and ran aground.[87] More recently, at least one Indian naval chief had to resign following a series of accidents that hit the Indian navy.[88]

The acquisition of six new French Scorpene submarines has been delayed and deferred several times over the past decade. The first Scorpene boat is scheduled for commissioning in 2016. Under the agreement, one Scorpene submarine is to be constructed in France while the remaining will be built by Mazagon Dockyard Limited Mumbai. Each boat is expected to take 12 to 14 months for construction from the date of keel laying. Considerable delay cannot be ruled out, however, given the fact that even the first submarine is yet to be commissioned.[89]

Nuclear submarines

After a long wait starting in late 1980s, INS Arihant, India's locally constructed nuclear submarine was finally launched in July 2009. It has since persistently run into technical and operational problems. The high-tech vessel project, which has been in research and development for well over 22 years, has incurred exponential cost overruns and delayed delivery schedules on several occasions. Like several other projects, it is again a tale of poorly performing Indian defence and strategic organizations like the DRDO. The nuclear submarine only started sea trials as late as December 2014.[90]

But even when completed, the more cumbersome process of operational integration of Arihant into the country's strategic deterrence construct will commence. It will subsequently necessitate the mating of SLBMs with nuclear warheads to be deployed on the vessel to meet the requirements of Triad and 'credible minimum deterrence' (CMD) as articulated in the Indian Nuclear Doctrine.[91] Such a process may take several years if not a decade. And for a country that has never allowed serving defence personnel to sit in any of its national level security meetings, entrusting a fully mated nuclear warhead to a field commander (commanding officer of Arihant) remains to be seen.[92]

In the meantime, India's sea-based ballistic missiles, the submarine launched ballistic missiles (SLBMs), are creeping towards validation and achieving desired parameters after test firings. In January 2013, following some nine years in development, the DRDO conducted a successful test of the 750 km solid fuel nuclear-capable K-15 SLBM. K-4, a successor to K-15, was also secretly test-fired by India in March 2014. It is expected to have ranges in excess of 3,000 km.[93] But despite this impressive breakthrough, India's undersea missiles are not deployable weapons yet. These have to be first mated with the Arihant nuclear-powered submarine,[94] which is still far from over with its test trials, let alone operational integration. Thus even with fully developed SLBMs, their deployment depends on the successful operational induction of Arihant in the Indian fleet. As of June 2015, this is far from over.

Figure 1

SEA BASED MISSILES

Source: *Murky Waters: Naval Nuclear Dynamics in the Indian Ocean, Carnegie Endowment for International Peace*, available online, accessed 9 March 2015.

Conclusion

Despite seemingly dramatic increases in its defence spending, projected to go upwards of US$100 billion on modernizing its armed forces, the Indian military faces significant shortfalls. These run from strategy level thinking to structural and capability deficiencies. This precludes India from attaining any significant regional power status, let alone global, in the foreseeable future. The most visible manifestation of the Indian military 'hollowing out' occurred in the wake of the 2008 Mumbai attacks, when the then army chief General Deepak Kapoor was reportedly forced to admit to his country's political leadership that the Army "was not ready for war."[95]

Matters are even worse in the Indian navy. The navy's strategic capability to perform beyond immediate shores is severely curtailed. Due to schism in internal thinking, critical hardware issues, and problems with operational integration of weapon systems, the Indian navy's operations are considerably repressed. What's more, the increasing number of major accidents in the recent past raises several questions about its professional competence.

China's rapidly expanding navy and a small yet resilient navy of Pakistan continue to present India with a formidable challenge. India's geographic vulnerabilities include proximity of its major sea arteries and principal ports (like Kandla) to Pakistan, rendering them open to exploitation. In the short to medium term, India is set to accrue advantage of the strategic crutches provided by the United States. It will bolster its domestic military industrial base and improve its operational capability. But India's aspiration to boast a blue water navy remains a distant dream.

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INDIA'S GRAND NUCLEAR STRATEGY: A ROAD TOWARDS DEPLOYMENT OF BALLISTIC MISSILE DEFENCE SYSTEM

ZAFAR KHAN[*]

Introduction

Since its announcement in the famous 'Star Wars' speech of the former president Ronald Reagan in 1982, the US has been heavily investing on the development and deployment of Ballistic Missile Defence (BMD) system both within the US and in Europe and Asia to protect its allies and partners from, what the US would call, the incoming rogue missiles from the so-called rogue states. The US development and extension of the BMD would certainly make China and Russia worry about their deterrence force credibility though. With the growing security concerns, both China and Russia would feel vulnerable unless the US tries hard to diplomatically convince the two strategic counterparts that these deployed defences are not developed against them. In the meantime, the US extended this partnership to India as part of the growing India-US strategic partnership. It would not only increase India's power potential in the South Asian region, but would also drift it away from its classic nuclear strategy and diplomacy conceptualized by its leadership earlier. In addition, it would dramatically change the security dynamics of South Asia in terms of increasing one state's security at the expense of the other. Moreover, India's deployed defences would become part of its grand nuclear strategy.

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The advocates of the BMD argue that it would serve India's doctrinal posture in the following ways:

- It would enhance the credibility of its deterrent forces;
- It would make it secure and more confident to protect its major cities and strategic assets from the incoming missiles;
- India could also expect it to blunt Pakistan's declaratory doctrinal posture of first use of nuclear weapons;
- The deployed defences could assure its security against terrorism and/or the threat of rogue missiles;
- The deployed defences would convince India about achieving its arms control and disarmament objectives in the region;
- It could support the credibility of India's massive retaliation; and
- The shield could make India look defensive and strengthen its no-first-use posture.

Conceptually, this article mainly argues that all of these assumptions are flawed as part of India's grand nuclear strategy in terms of what the deployed defences of India would expect to achieve.

This research paper argues that India's deployed defences would have diverse strategic effects in South Asia, and would not achieve what many proponents of the BMD argue. In addition to analyzing a few important works on India's deployed defences, this paper crafts a conceptual demonstration that would critically analyze the proposals that proponents of India's BMD present. There is little or no conceptual work that substantially demonstrates the flaws of the proponents of India's deployed defences. This paper conceptually treats these essential arguments and substantially elaborates how and why the proponents of India's deployed defences may not be too convincing and how this could emit diverse strategic repercussions in the South Asian region.

It begins with a brief discussion on India's development and deployment of the BMD system. It then analyzes the debate between BMD pessimism and BMD optimism in order to understand the central assertion: how and why the arguments presented by the proponents of India's deployed defences are unconvincing and flawed?

A road towards development and deployment of the BMD system

India initiated various missile developments in its broader missile technological programme dubbed as the Integrated Guided Missile Development Programme (IGMDP) in 1983 just when President Reagan delivered the 'Star Wars' speech to formally commence the Strategic Defence Initiative (SDI). The conceptualization for formally initiating India's indigenous BMD system by its Defence Research and Development Organization (DRDO) came in the 1990s though. The full scale development and deployment of the BMD began after India ultimately agreed to a broader strategic framework that would include US assistance to India for building its BMD system. Besides the French, Russian,

and Israeli strategic partnership with India, the US assistance in this broader strategic domain gave it greater confidence to exploit the strategic opportunities available from all corners of the world. In possession of nuclear weapons, India's missile defence system becomes part of its grand nuclear strategy, which goes beyond the security orientation to a grandiose power projection in the South Asian region.

India has been actively pursuing a two-tiered missile defence shield:

- Prithvi Air Defence missile (PAD) to intercept the high altitude (exo-atmospheric) missiles;
- Ashwin Advanced Air Defence (AAD) to intercept the low altitude (endo-atmospheric) missiles.

It is estimated that this two-shield BMD system is supposed to intercept any incoming missile launched from 5,000 km away. India has been continuously conducting various PAD and AAD missile defence tests to enhance their credibility and meet the range requirements of the two missile defence systems for successful interception of incoming missiles. For example, PAD could intercept incoming missiles at the altitude of 50-80 km and AAD could intercept the incoming missiles at the altitude of up to 30 km. In support of these two missile defence layers, India requires various technological equipments such as radar systems, satellites, a number of launch vehicles, and launch control and mission control centres to help successfully deploy its BMD. India has acquired Green Pine radar from Israel as it failed to obtain Arrow-2 system because of Missile Technology Control Regime requirements. In addition to a successful development of fire control system and Swordfish tracking in collaboration with France and Israel, India is seriously working on obtaining Israel's Iron Dome missile system.[1] Furthermore, the DRDO has ambitious plans to integrate its BMD system with an array of geostationary satellites in order to monitor missile activities within a radius of 6,000 km.[2]

As India advances to mature its BMD system with greater assistance from the US and other countries such as Israel, Russia, and France, it claims to have successfully conducted various ballistic missile tests intercepting a variety of ranges of incoming missiles. Although India's claims are tall, it is yet to deploy and successfully operationalize a BMD mechanism to protect all of India and its strategic assets from incoming missiles. It is not completely clear whether or not India has really achieved such a magnificent BMD system that could 'hit to kill' all types of missiles, and protect all its major cities. Currently, India claims to protect only two important cities, i.e., New Delhi where India's political leadership sits, and Mumbai, India's economic nerve on which its commercial and economic activities depend.

However, there is a difference between the favourable simulation conditions during peacetime and the real crisis time where India's BMD could confront different and more challenging conditions.[3] One malfunction could put the expensive defensive mechanism in jeopardy. The consequences could be unacceptable for India in general and for regional peace and strategic stability in particular. This fear pushes India to work hard on integrating innovative technologies with its BMD system to avoid malfunctions and failures,

notwithstanding the costs. Sumit Ganguly argues, "India is still quite far from being able to deploy them in battlefield circumstances or during crisis conditions. Furthermore, it is not entirely clear whether India intends to develop its BMD capabilities to protect its major population centres, key installations, or other sites of strategic significance."[4] This is discussed later. First, it is important to know the arrival of BMD in India and its ultimate acceptance for its defence. The following section would talk about the BMD system in India with reference to the debate between BMD optimism and BMD pessimism. This is important to elaborate in order to understand the central argument of this paper, which follows this section.

The arrival of the BMD system: debating the optimism and pessimism

With the arrival of missile defence system in India, it seems to depart away from the classical Gandhian and Nehruvian principles of non-alignment, and arms control and disarmament. The need for missile defence system divided Indian experts into two camps: BMD pessimists and BMD optimists.

The BMD pessimism

The BMD pessimism calls attention towards the negative implications of the proposed BMD deployment for India, such as an arms race in the region, increase in India's security spending, strategic pressures on both China and Pakistan to counter its effects on their security, and driving India away from the normative principles of global arms control and disarmament its earlier leaders conceptualized. When the United States announced its SDI as a long-term programme for erecting missile shield for protecting its homeland, India opposed it as it disapproved of the various combinations of nuclear strategies the US and the Soviet Union crafted and played out during the Cold War. For India, the US National Missile Defence Programme would promote the "continuing arms race between the superpowers; a further movement away from the ideals of disarmament; increased pressure on its superpower patron, the Soviet Union; a potentially expanded nuclear threat from its key Asian rival China; and a threatening shift towards uni-polarity."[5]

India's earlier strategy clearly reflected its opposition to the BMD system of the US, but it continued to work on the military development of nuclear weapons. Despite India's efforts to correct its strategic partnership with the US that would gradually drift India away from the Non-Aligned Movement, Indian leadership opposed the US SDI programme in the 1980s. For example, the then Indian prime minister Indira Gandhi opposed the US SDI at the Thirty-Eighth Session of the United Nations General Assembly in 1983.[6] The then Indian minister for external affairs P.V. Narasimha Rao was extremely blunt in expressing India's opposition to such framework of missile shield. He stated, "the extension of arms buildup to outer space would mean a permanent goodbye to disarmament and peace and [would] plunge mankind into a perpetual nightmare."[7] In a similar context, the then Indian ambassador to the Conference on Disarmament, Muchkund Dubey, opposed the US president's proposed SDI

and urged for negotiations on the prevention of an arms race in the outer space (PAROS). A decade later, PAROS became one of the essential elements of the Shannon Mandate proposing a framework for the Fissile Material Cut-off Treaty (FMCT).[8] Ironically, India currently does not agree to what Shannon framed in 1995, i.e., an agreement on the existing fissile material that need to be eliminated.[9]

Even after India had acquired nuclear weapons and tested this capability in May 1998 in addition to its 1974 nuclear weapons test—which India proclaims to be a Peaceful Nuclear Explosion (PNE)[10]—the BMD pessimism continued in India attempting to reject the formal US assistance for developing India's missile defence shield. Through the lens of international opposition to the unilateral US attempt to abrogate the Anti-Ballistic Missile (ABM) Treaty[11] by deploying missile defence shield, many in India opposed what was going to be greater India-US strategic partnership, particularly introducing the missile defence shield in India. The US BMD was seen by many in India as a unilateral, reckless, and patent disregard for the international endeavours for a universal arms control and complete disarmament.[12] The US BMD was also seen as expensive, ineffective, and de-stabilizing for the region, as it would weaken the credibility of Russian and Chinese deterrence forces. Despite the sharp opposition to the emerging India-US strategic partnership on missile defence shield both within India and abroad, the new Indian leadership embraced the BMD framework after some initial confusion to facilitate India's drift away from the earlier normative principles of arms control and disarmament. So the BMD optimism prevailed in India as it ultimately committed to broader strategic partnership with the US on missile defence shield.

The BMD optimism

India's preference for an allied status, starting in 2000s, gradually helped India shed its baggage of the Non-Aligned Movement. This would prove to be a great shift in India's foreign policy. The BMD optimists argued that it would provide India security, enhance its deterrence stability, and help the arms control process in South Asia. The central argument of this camp was that India would benefit from striking strategic initiatives with developed countries, including the US, to build a defence shield that would secure India from incoming missiles and ultimately make India part of the would-be Global Missile Shield.

Former US presidents, Bill Clinton and George Bush, were interested in taking India on-board both to seek India's support for the US missile defence programme internationally and to provide an incentive to it for commencing its BMD system in the region. In the early 2000s, the US administration encouraged India on the initiation of this hallmark India-US strategic partnership. During former US president Bill Clinton's visit to India in March 2000, the then Indian prime minister Atal Bihari Vajpayee remarked that the two countries "have all the potential to become natural allies."[13] This shift also reflected that India would be least bothered about the US abrogation of the

ABM treaty in 2002. The then Indian defence minister Jaswant Singh's special adviser Arun Singh also expressed his support for the US strategic partnership on facilitating Indian BMD system for increasing strategic cooperation and technology transfer, which the so-called ABM treaty hindered. This strategic partnership would include India in the category of the 'legitimate nuclear weapons states'.[14] Therefore, India realized that it was not to lose much from the US departure from the ABM treaty; rather many Indians considered it an opportunity in the shape of the US recognition of India's nuclear legitimacy and its role in the increasingly globalized world. It was India's departure from its earlier conceptualization of a nuclear order.[15] It would provide India "advanced military technology development, opening the door for joint technological development and data sharing."[16] Moreover, many Indians ambitiously thought of the growing US-India strategic partnership in terms of assisting India to secure a permanent seat at the United Nations Security Council.[17]

To summarize: India's leadership, that initially opposed the US missile defence shield programme and its ultimate abrogation of the ABM treaty, later realized the importance of the US-India strategic partnership that would provide India incentives to meet its economic, political, and strategic goals. This is not merely a shift from India's traditional policy of Non-Aligned Movement based on the older nuclear order that called for arms control and disarmament between the major nuclear weapons states, but also reflects a shift in India's nuclear strategy in terms of embracing the missile defence system. The arrival of the BMD system in India—with its sophisticated cutting-edge technology—depicted India's grand nuclear strategy, which aspires to make India look bigger in terms of its security, prestige, and power projection in the South Asian region. But India's road towards deployment of both limited and extensive ballistic missile defence shield will have a greater strategic impact in the region. It is important to analyze why India actually pursues the BMD system. Do these dynamics—driving India towards a more extensive BMD programme—justify what India strategically conceptualizes? How could this logically and rationally embed within India's security parameters?

Conceptualizing the essential dynamics of India's BMD

There are several strategic dynamics that drive India to acquire the missile defence shield. The mere technological and organizational calculus with regard to one of India's most influential organizations—the DRDO—is not enough to explain why India goes for the BMD. Many Indians link the development and deployment of the BMD to strategic dilemma factors. Others think that with the deployment of the BMD, India would defend itself from incoming missiles, enhance its security, and strengthen its retaliatory nuclear strategy. They may also conceptualize that the BMD system would strategically support India's motives of arms control and disarmament both at the international and regional levels. Additionally, they argue that this could help India's traditional nuclear doctrinal posture of no-first-use, which in turn would blunt Pakistan's first-use nuclear option that it follows because of a growing

conventional asymmetry between India and Pakistan. Some of these dynamics of India's missile defence are conceptualized next.

India's deployment of the BMD against accidental and unauthorized use, and terrorist attacks

It is argued that India's development and deployment of the BMD would protect its territory, and partially its strategic assets, against the accidental or unauthorized use and terrorist attacks when and if deterrence fails and India confronts a worst-case scenario. Many would think that it would be able to reduce the damage if any one of these eventualities takes place against India. For example, Rajesh Basrur opines that one of these attacks might come from Pakistan and its territory and India's BMD system would be able to reduce, if not completely eliminate, the danger.[18]

The importance of these arguments coming largely from India, however, would depend on the likelihood of such attacks, that is, these attacks might not take place against India from the Pakistani territory in the first place. There is no evidence that Pakistan has either lost control of its strategic assets or the terrorists have used its deterrence forces against India. Even the relative probability of such scenarios is extremely speculative with no empirical evidence. The terrorist attacks that occurred in India in the past were from within India, which it could have prevented by taking certain proactive counter-terrorism measures rather than necessarily erecting missile shield that may not forcefully address the complex issue of terrorism. The stringent export control measures and robust and centralized command and control of Pakistan's deterrence forces have further reduced such possibilities that India fears about. The international community actually acknowledges Pakistan's rigorous institutional and organizational measures in terms of safety and security of its forces.

There is also a lesser possibility that these scenarios might occur from China. Since the short 1962 China-India border war, both the countries have been trying to resolve their border issues amicably and improve economic ties. In fact, economic integration between India and China is growing today, which in turn reduces the chances of these speculative scenarios. The commonalities within their nuclear strategies such as the no-first-use official doctrinal posture, massive retaliation, and credible minimum deterrence further avert such possibilities. But the deployment of India's BMD system could create complications between China and India at some point in future.

Therefore, the argument that India's deployment of the BMD system is against these scenarios does not hold, since the probabilities of such attacks are slim. In this context, India's BMD system would not make significant difference. The lower the possibility of such attacks on India in the absence of BMD, the smaller is the need for such a shield to protect it. What India could do is to revisit its normative posture of universal arms control and disarmament to address such issues.

India's deployment of BMD could ease its past frustrations and blunt Pakistan's first-use nuclear option

Being frustrated both in the Kargil episode in 1999, as well as in the 2002-03 standoff because of the fear of nuclear escalation, some Indians would want BMD to decrease the likelihood of the repeat of such strategic frustrations. Many in India think of the arrival of the BMD as an incentive to revitalize India's possibility of waging a limited war, as it would blunt Pakistan's declaratory nuclear strategy of first-use.[19] In other words, India's BMD could strengthen India's proactive military strategy dubbed as the Cold Start Doctrine (CSD)[20] aiming at conducting a limited surgical attack against Pakistan.[21] Thus, India would have both the sword to fight and shield to protect.

These arguments make India look more competitive, offensive, and assertive. It is understandable that India's deployment of BMD could possibly strengthen its CSD in terms of providing incentive to strike first with the confidence to defend with its shield. But it is not clear how India's deployment of BMD would help Pakistan understand that the integration of the BMD with the CSD could possibly blunt Pakistan's first-use nuclear option. This confusion could have the following strategic repercussions:

1. It could complicate the strategic balance between the two states;
2. It could increase Pakistan's reliance on nuclear weapons;
3. It could further widen the conventional asymmetry in the South Asian region; and
4. It could increase the risk of a nuclear catastrophe in South Asia.

Pakistan has developed a short-range (60 km) ballistic missile (Nasr) in response to India's military development and deployment of the CSD closer to Pakistani border to plug the missing gap at the tactical level and counter India's military motives for surgical strikes against Pakistan. Although there are worries with regard to the deployment of the non-strategic weapons such as 'lose and use', 'pre-delegation', and 'pre-emption', these worries can be averted if Pakistan continues to practise the principles of centralized command and control mechanism.[22] Arguably, these strategic worries largely existed during the Cold War era between the Soviet Union and the US. With the centralized command and control of the battlefield weapons, Pakistan may not only avert these strategic worries associated with the non-strategic weapons, but it could also potentially deter India's proactive military strategy designed for waging a limited war. However, attempts for integrating the BMD with the CSD in terms of neutralizing Pakistan's nuclear capability of first-use could undermine Pakistan's deterrence credibility, providing incentives for India to wage a limited war at its own choosing. This could put greater strategic pressure on Pakistan.

To prevent the erosion of strategic balance in South Asia, the CSD combined with the BMD would entice Pakistan to opt for certain options. In this context, India could expect the following from Pakistan:

1. It could strengthen its reliance on battlefield nuclear weapons, but under the centralized command and control system to avoid the worries of preemption, pre-delegation, and lose and use strategic dilemma.
2. It could clearly communicate to the adversary that although Pakistan considers its nuclear weapons for deterrence purposes and it, in no way, considers them as military tools, it *could* use them if *absolutely* needed for its ultimate survival.[23] Presumably, Pakistan may not convey its red lines, i.e., when, how, and where Pakistan might use nuclear weapons. Ambiguity, that serves Pakistan's deterrence purposes and suits the broader contours of its nuclear strategy, could play a central role in this domain. This is to manipulate the mindset of its adversary and ensure the credibility of its deterrence forces for the purpose they are developed. The strategic motive is to prevent both conventional and nuclear wars.
3. More important, India's CSD bolstered by deployed BMD could not only help Pakistan increase its reliance on deterrence forces, but could possibly encourage it to proportionally increase the warheads to meet the changed strategic demands prevailing between India and Pakistan.

The argument that India's BMD deployment integrated with the CSD could blunt Pakistan's nuclear strategy of first-use is flawed. It could possibly strengthen the CSD in some way, but it may not blunt Pakistan's option of first-use. Also, Pakistan's increasing reliance on and the proportional increase of its deterrence forces vis-à-vis its adversary's CSD/BMD deployment may gradually make India realize the weaknesses and complexities of its warlike doctrinal posture in the presence of nuclear weapons.

India's deployment of BMD is defensive

Another argument in favour of India's deployment of BMD is that it is not offensive: not for territorial gains. It is asserted that BMD is only for defensive purposes to protect India's major cities and its strategic assets, and not to intimidate or threaten Pakistan.[24] Apparently, India repeats a rationale similar to that of the US with respect to its strategic rivals Russia and China. The US asserts that its abrogation of ABM treaty in 2002, and plans to deploy missile defence shield both in Europe and Asia do not necessarily aim to intimidate the Russians and Chinese, but are against the possible incoming missiles of Iran, North Korea, and Iraq (for instance, during Saddam's regime). The Chinese and the Russians are not fully convinced through. They still have serious reservations on the consistent US development and deployment of BMD.[25]

India could expect a similar kind of response from Pakistan. The Indian argument, that its missile defence system is only for defensive purposes and not necessarily to intimidate Pakistan, is weak. India's power potential and its growing strategic partnership with the developed countries including the US aim at increasing its security. It falls within the classic sense of strategic security

dilemma, i.e., the increase of one state's security would intentionally or unintentionally decrease the security of the other state. India's deployment of defences would not only increase India's security thereby largely undermining the security of Pakistan, but would also increase the strategic competition between the two states. Charles Glaser argued about US BMD, "Deploying defenses will almost certainly increase the competition: Soviet deployment of BMD will increase US leaders' doubt about the adequacy of their offence, and vice versa. As a result, the current competition in offensive forces would be exacerbated; and, of course, a new full-fledged competition in defenses would likely be set in motion."[26]

In a similar context, security dilemma and strategic competition become part of deployed defences either for defensive or offensive purposes. Although India's deployment of defences would make it look defensive and unintimidating, its adversary, Pakistan or China, would perceive India from a different strategic lens. For example, since Pakistan would perceive India to be offensive, India's offensive assertion will pull Pakistan into a classic security and strategic competition. Moreover, India's DRDO is making efforts to achieve the escalation dominance in terms of developing multiple independently targetable reentry vehicles (MIRVs) for some of India's Agni missiles in conjunction with a layered BMD system. This could be interpreted as India's strategic endeavour to achieve first strike capability.[27] The deployed defences would provide it strategic advantage to strike first with the confidence to shield the attacks of incoming missiles of various ranges, which in turn pushes up India into the escalation ladder, driving it for a massive retaliation. This escalatory scenario could make Pakistan worry about the adequacy of its forces, thereby, pushing it towards what Glaser conceptualized: increasing the size of the attack to overcome the defence.[28]

Therefore, the argument that India's BMD is for defensive purposes is flawed. Pakistan may expect India to convincingly assure it that its BMD is not to intimidate Pakistan and strike first. Currently, the US practises these diplomatic assurances through the language of nuclear diplomacy to assuage the worries of China and Russia that its BMD system is not necessarily to undermine the credibility of the offensive forces of both the countries, but to address the contemporary complex issues of nuclear terrorism or incoming rogue missiles. But as the US continuously fails to convince both the Chinese and Russians, India could be unable to convince both Pakistan and China on the aims of its deployed defences.

India's BMD to support arms control process and encourage the offensive reduction

The US strongly believed in the 1980s that deployment of defences would help reduce the offensive forces between the two superpowers of the time (the US and the Soviet Union), and at the same time, the BMD system would encourage the two sides for an arms control process. For instance, former US president Ronald Reagan stated, "[the BMD] could pave the way for arms control measures to eliminate the weapons themselves."[29] This was along the

lines of the logic that the BMD system would reduce the utility of the offensive forces and convince the adversaries about not building more. The proponents of the BMD arguing in favour of the deployment of the defences said, "if the cost of building offenses to defeat defenses is greater than the cost of building defenses, (i.e., the 'cost-exchange ratio' favoring the defense), then the US deployment of defense might essentially force the Soviet Union (Russia) to give up its offensive capability."[30] In a similar context, the proponents of the BMD in India would claim that the deployment of the defences would provide incentives for strategic stability and counter-proliferation of the ballistic missiles with weapons of mass destruction.[31]

The BMD pessimists, however, convincingly argue that the BMD deployment would not encourage arms control process, particularly if the BMD reduces and/or significantly undermines the adversary's offensive capability.[32] For instance, the US estimated during the Cold War that if the US BMD deployment would reduce the Soviet offensive force capability by erecting the shield, it would be hard for the US to get the Soviet Union on board for an arms control process. Rather, the US would expect an increase of the Soviet's force size and penetrability.[33] Similarly, the opponents of the defences deployment in South Asia would critique the idea that defences would support arms control process and force reduction. They would argue that the so-called defences could undermine the offensive forces of the adversary, thus encouraging it to enhance its force size and penetrability to offset the defences. If India's defence deployment creates difficulties for Pakistan's minimum deterrence forces that are meant for counter-value and counterforce missions, the utility of nuclear weapons would remain high and Pakistan could react to these defences with increasing the lethality, manoeuvrability, accuracy, and penetrability of both its ballistic and cruise missiles in order to defeat the defences. This could also include the force size increase to equal or surpass the estimated numbers of the adversary's interceptors for obtaining a considerable hedge against the deployed defences. India's BMD deployment as part of its grand nuclear strategy and Pakistan's likely responses could in turn change the contours of credible minimum deterrence in South Asia. It could make it hard to define the minimum in the South Asian context. Minimum deterrence would bear different interpretations and would likely get framed in accordance with the changed strategic environment.

One may argue that if both India and Pakistan develop and deploy defence forces, then this could negate both the adversaries' capabilities to undermine the deterrence forces of each other. That said, if India's deployed defences undermine the utility of Pakistan's nuclear weapons, Pakistan could also frustrate India's motives by striking first to significantly undermine India's nuclear strategy of retaliation through its deployed defences. Whether or not the defence would favour the offence would then depend on the credibility of the deployed defences though. If defence becomes more expensive than offence, then a state could highly rely on offence, not necessarily erecting the shield. In this case, the deployed defences become more costly as "they are asked to perform more demanding missions since they must be able to defeat the full

range of offensive countermeasures, which in turn makes the cost-exchange ratio more favorable to the offense."[34] Both the development and deployment of the BMD system would consume lots of India's economy, which in turn would put economic pressure on Pakistan's annual defence expenditure. India's gradual hike in its defence expenditure would affect the economic health of South Asia. Nevertheless, neither the US nor the Soviet Union would be in a position to protect many of their major cities through their deployed defences during the Cold War period, and even today. In a similar vein, it might not be possible for India to protect all of its cities and strategic assets by its BMD system. India still lags far behind in achieving its BMD perfection.

India, through its deployed defences, should not expect Pakistan to accept its logic for it that Pakistani deterrence force capabilities have become redundant and not worth spending on. India should expect Pakistan to work hard to find ways to defeat the defences. One may not assume that Pakistan would reach to a conclusion of considering its deterrence forces worthless before India's deployed forces. After all, it was Soviet Union's deployed defences during the Cold War period that spurred the US to develop MIRVs and other missile capabilities that could perform well in defeating the Soviet missile defence system. China has developed anti-satellite missiles with the capability to destroy the satellite system supporting the missile defence shield in Asia, which makes the US deployed defences in Asia vulnerable to the Chinese force development. Similarly, Pakistan could also produce certain types of capabilities to undermine India's missile defence mechanism. India might intercept some of the incoming missiles for some of the cities and/or strategic assets, but India might not be able to protect all the cities and all the strategic assets, thereby, demonstrating the vulnerabilities of the deployed defences.

Therefore, the argument that India's deployed defences could ease the arms race and provide incentives for offensive reduction is flawed. Deployed defences would rather encourage the other side to increase the size of the attack and penetrability to defeat the missile defence system. Arguably, although India's deployed defence may increase India's security and defences, these forces decrease the security of China in general and Pakistan's in particular. The deployed defences of one state would have strategic effect on the other state.

Conclusion

India is fast developing its missile defence system in order to protect its major cities and strategic assets. In addition to securing cutting-edge technological assistance from developed states, especially the US, India remains confident to integrate these ingredients indigenously in relation to its plans for deployed defences. However, India still lags far behind from achieving such a perfect integration that could ensure the protection of its major cities and many other population centres, including strategic assets, in a real crisis situation. India's deployed defences would spur an arms race by undermining the deterrence credibility of Pakistan, weakening its deterrence posture, and discounting the efforts aimed at both the conventional and nuclear confidence building measures in South Asia.

Although India's deployed forces could provide India the strategic confidence to increase its security, its missile defence system could also decrease India's security in the following ways:

- It could pull Pakistan into an unending arms race, even though Pakistan may not necessarily desire to indulge in it;
- It could decrease Pakistan's security in particular and China in general;
- It would challenge the credibility of both Pakistan's and China's deterrence forces;
- It would increase nuclear risks;
- It would not be able to protect all of India's major cities and strategic assets; and
- It would provide incentive to its adversaries to rely on their nuclear weapons to offsets India's deployed defences.

The more India works on its deployed defences, the more it decreases its own security, because the higher the strategic pressure on Pakistan, the greater the risk of war.

The arguments that India's deployed defence would stop arms race, strengthen India's no-first-use doctrinal posture, reduce the offensive forces in South Asia, control the complex issues of terrorism, blunt Pakistan's nuclear weapons, improve India's defences, and ease its past strategic frustrations are flawed. Therefore, India's deployment of missile defence system, which undermines the strategic balance and deterrence stability in South Asia, is not in the greater security interest of India. Furthermore, this will not be consistent with India's nuclear doctrinal posture it earlier conceptualized. In fact, India's deployed defences would be an immediate departure from what it earlier pursued in favour of its recently developed grand nuclear strategy.

This grand nuclear strategy includes India's gradual shift in its nuclear draft policy, proactive military strategy (the CSD) aimed at waging a limited war in the presence of a nuclear overhang, the development and deployment of inter-continental ballistic missiles, MIRVs, nuclear submarines, special wavier by the NSG in terms of securing advanced nuclear technology to be able to produce more fissile material to suffice the credibility of modernized deterrent forces, and last but not least, the missile defence system. Apparently, all of these ingredients become an essential part of India's evolving nuclear doctrinal posture, which in turn makes India look assertive.

India continues to treat the essentials of its credible minimum deterrence differently, diverging from the language of minimum and coherent nuclear diplomacy. Its deployed defences could significantly undermine the deterrence stability in South Asia. It needs to return to what it earlier conceived, following the principles of the minimum and coherent nuclear diplomacy to avoid the danger of an arms race, strategic instability, and nuclear war in South Asia.

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IRAN'S NUCLEAR DEAL: GLOBAL RESPONSE AND IMPLICATIONS

AMIR JAN*

Introduction

The nuclear programme of Iran has been the main cause of confrontation between Iran and the West for the last three decades. Tehran portrayed its nuclear programme as only aiming to meet the energy deficiency in the country, and tried to assure the international community that uranium enrichment would only be used for peaceful purposes. On the other hand, the West generally and the US specifically pressurized Iran to dismantle its nuclear programme because they believed that Iran's enriched uranium could fall into the hands of non-state entities to endanger world peace. The contradictory views of Iran and the West over the nuclear issue of the former led them into a series of confrontations, allegations, and counter-allegations.

Getting nothing out of the confrontation, the US finally engaged Iran in a series of bilateral discussions. In March 2013, the last bilateral discussions with the administration of former Iranian president Mahmoud Ahmadinejad were held in Oman. These talks were attended by Jake Sullivan and William Joseph Burns from the US and Ali Asghar Khaji from Iran.[167] When Hassan Rouhani was elected as President of Iran in June 2013, the pace of negotiations accelerated. The reason for this was that the newly appointed president was moderate, flexible, and more willing to have negotiations with Western countries over the nuclear programme of Iran as compared to his predecessor. In August 2013, Rouhani invited the West to table-talks over the nuclear programme of Iran. Right after the invitation, US President Barack Obama had a direct telephonic conversation with President Rouhani. It was considered a big breakthrough, since it was the first high-level contact between Iran and the US

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after 1979. Soon after the telephonic conversation, US Secretary of State John Kerry held a meeting with Iran's Foreign Minister Mohammad Javad Zarif. It paved the way for cooperation and negotiations.[168]

After a series of meetings and discussions, finally on 24 November 2013, an interim agreement was concluded which was officially named Joint Plan of Action. The said agreement on Iran's nuclear programme was signed by P5+1 (US, Britain, Russia, China and France + Germany), European Union, and Iran in Geneva, Switzerland. The interim agreement bound Iran to freeze a small portion of its uranium enrichment for a short period, while on the other hand, Western countries agreed to reduce the number of sanctions which had been imposed on Iran. Moreover, the International Atomic Energy Agency (IAEA) was assigned the task to inspect nuclear sites of Iran and submit its reports at the earliest possible. On 20 January 2014, IAEA issued a report in which it stated that Iran had been following the terms and conditions of the interim agreement. The report further stated that Iran had reduced its enrichment of uranium to 20 per cent, started the reduction process, and stopped work on the Arak heavy water reactor.[169]

It should also be noted that under the terms and condition of the interim agreement, Iran accepted to end its medium-enriched uranium, eliminate its low-enriched uranium by about 98 per cent from its stockpile, and decrease its centrifuges to almost two-thirds for a period of 15 years.[170] It was also agreed that for the coming 15 years, Iran would have uranium enrichment up to 3.67 per cent. Iran also accepted the condition that it would not construct any heavy water facilities for the same period. Iran agreed that its existing uranium enrichment materials would be confined to one facility where First Generation centrifuges would be used for ten years with no other similar functional facilities.[171] Furthermore, the agreement gave IAEA access to Iran's entire nuclear plants and authorized it to monitor and verify whether Iran was complying with the Interim Agreement or not. It was also agreed by the signatories to the Interim Agreement that if it is verified that Iran has completely complied with it, the US and EU, along with the United Nations Security Council (UNSC) would lift nuclear-related sanctions against Iran.

Moreover, in order to formalize and regularize the agreement for a longer period of time, Iran and the West started negotiations. The series of negotiations, which continued for 20 months, laid the foundations of the Joint Comprehensive Plan of Action (JCPOA).[172] Before, the formal conclusion of JCPOA, Iran, P5+1, and EU concluded Iran's Nuclear Deal Framework on 2 April 2015 in Lausanne, Switzerland. Actually, after the conclusion of Iran's Nuclear Deal Framework, Iran agreed to restrict its nuclear programme and allow the international agencies to access its nuclear sites and facilities on regular basis. Therefore, flexibility on the part of Iran and the West formally paved the way for concluding a comprehensive agreement, known as the Joint Comprehensive Plan of Action, in Vienna on 14 July 2015.[173] The Nuclear Deal Framework of April 2015 was thus the founding stone of JCPOA. Before the conclusion of JCPOA, many observers felt that the negotiations may not be successful, but the negotiators continued their efforts and finally reached an

agreement.[174] As the signatories were about to conclude the deal, the US Secretary of State John Kerry directly asked Foreign Minister of Iran Mohammad Javad Zarif to make sure whether he had the authority to make a final deal or not. The latter assured Kerry that he had come to negotiate with full authority.[175] As a result, the huge breakthrough was announced publicly that JCPOA has been finalized. The said announcement brought relief not only at official level but also among public in general.[176] No doubt, the true spirit of the agreement lies in the intention of Iran and the West. But the Non-Proliferation Treaty (NPT) and IAEA need to play their pivotal roles for the true protection of the agreement so that tensions between the West and Iran de-escalate.[177]

The facts of JCPOA

No doubt the JCPOA forced Iran to compromise on its nuclear programme, but it also relieved it of a host of international sanctions. The agreement that Iran would decrease its existing low-enriched uranium by about 98 per cent means that Iran would reduce its stockpile of said uranium from 10,000 kg to 300 kg. The said reduction will be sustained for 15 years.[178] Iran has also been restricted to limit its uranium enrichment to 3.67 per cent since it is believed that the 3.67 per cent will be enough for the use of civilian nuclear power and research.[179] The 3.67 per cent could also be enough for development of nuclear weapons but Iran will not be allowed to use it for that purpose.[180] The reduction of Iran's uranium enrichment is the greatest decline in Iran's nuclear energy ever. But after 15 years, the West will remove all physical limits on enrichment of uranium which includes the types and numbers of centrifuges. Iran will also enjoy the enrichment facilities.[181]

Iran also accepted the condition in JCPOA that for the duration of ten years, it would keep two-thirds of its centrifuges in storage. Among the existing stockpile of 19,000 centrifuges (10,000 are operational) Iran would only be able to use 5,060 to enrich uranium only in Natanz Plant.[182] It was also agreed that for the same period, Iran would use its IR-1 centrifuges at the Natanz site. It should be noted that IR-1 are the oldest and least effective centrifuges of Iran. On the other hand, Iran would not use its more modern IR-2M centrifuges according to the agreement.[183] Moreover, the centrifuges which are not operational would be kept and stored in Natanz under IAEA supervision. Iran would be allowed, however, to replace any failed centrifuges with the IR-2M versions. Iran also agreed under JCPOA that it would not construct any new facilities for enrichment of uranium for the next 15 years.[184] Further, Iran can only conduct research and development activities on enrichment at Natanz Plant, albeit with certain limitations, for eight years.[185] Moreover, Iran with the collaboration of P5+1, will construct the Arak heavy water reactor in accordance with the agreed conditions of JCPOA for research and energy generation. This was actually aimed at reducing the production of plutonium in order to stop the production of weapons-grade plutonium. According to the terms and conditions of JCPOA, the P5+1 assured Iran of full support for the construction of Arak complex. It was also agreed that Iran would send all the spent fuel outside the country along with all the excess heavy water when Iran's need is sufficient, and

sell it in the international market on reasonable prices. Furthermore, as per the JCPOA, Iran cannot do research on or use the spent fuel within its facilities for 15 years.

As per the JCPOA, the Fordow nuclear facility of Iran is neither allowed to enrich uranium nor conduct research on enrichment of uranium for 15 years. Iran is required to convert the Fordow facility into a nuclear physics and technological centre. For the said period, Iran will sustain the quantity of 1,044 IR-1 centrifuges in six cascades in one branch of Fordow. Among these, two cascades would be maintained without any uranium with the suitable infrastructure modification for the purpose of production of radioisotopes which would be used only in agriculture, medicine, science, and industry. The remaining four cascades will remain inactive since Iran would not be allowed to use or keep any sort of fissile materials in the Fordow facility.[186]

In the JCPOA, it was decided that Iran will enforce an Additional Protocol Agreement, which will be carried on unless Iran becomes a party to NPT because the Additional Protocol Agreement will be the symbol of continuation of the monitoring and verification process.[187] It was also decided that an inspection team will be formed to monitor and ensure whether Iran has fully complied with its obligations or not.[188]

IAEA has been assigned the work of oversight and monitoring of the nuclear programme of Iran including its enrichment of uranium, uranium mills, processing, and its sites and plants.[189] IAEA would be allowed access to the nuclear facility of Natanz and Fordow on daily basis along with its surveillance equipments. IAEA has been authorized to use different sorts of technologies including fibre-optic, which electronically sends information to IAEA. The IAEA would use infrared satellite technologies which help detect secret sites. It would also use environmental sensors and detective technologies that find minor signs of nuclear elements, and tamper-resistant and radiation-resistant cameras.[190] Moreover, in order to collect information and detect anomalies, IAEA has been given the task to use computerized accounting programmes.[191] The inspectors' team would be expanded from 50 to 150. They would be chosen from countries with which Iran has diplomatic ties.[192]

It is to be further noted that the inspectors of IAEA would be allowed to inspect any of Iran's non-declared sites if they have even minor reservations over it. The process of inspection would begin, however, with the request of IAEA to Iran for grant of permission to access and verify undeclared nuclear materials and activities. Iran would be obliged to give permission for inspection of any site about which IAEA has concerns.[193] If any disagreement would occur between IAEA and Iran during the process of inspection, they would be required to resolve it among themselves within 14 days, if it would remain unsolved; it would go to the Joint Commission (a commission formed by the members of JCPOA to supervise and observe the implementation of JCPOA) for resolution within a week. The majority of the commission will have the final decision, which Iran will have to comply. In case of failure to comply within three days, the sanctions will be re-imposed automatically on the basis of snapback provision.[194]

International response to the deal

As soon as the JCPOA was concluded, the international community responded with different views. Most of the states applauded the deal and termed it a big breakthrough of modern age. On the other hand, however, the Israeli government and the Republicans from the US termed it an inescapable danger for world peace. Some hardliners within Iran criticized the deal too.

US stance

In an address, US President Barack Obama said that the deal was deliberated thoroughly and take into account every single factor of Iran's nuclear programme with provisions of inspection for verification of each item of its nuclear sites.[195] The US President further said that the deal was concluded on verification rather than trust.[196] The president also said that he would veto any Congressional bills that would be against the deal and its implementation process since the said deal met all national security needs of the US and its allies. He publicly criticized the people who were against the deal.[197]

US Secretary of State John Kerry termed the deal a successful agreement and added that it was a great step to halt further proliferation of nuclear weapons. He further said that the deal would, by any means, stop Iran from enriching uranium secretly.[198] John Kerry argued that the way the critics wanted to halt Iran's nuclear programme was not possible because coercive options were not a solution.[199] Former US secretary of state Hillary Clinton labelled the deal as an essential step in stopping Iran's nuclear race. Former chairperson of the US Senate's Committee on Veterans' Affairs Senator Bernie Sanders said that the deal was the triumph of diplomacy over any military action in Iran that would throw the US into another never-ending war in the Middle East.[200] House Minority Leader Nancy Pelosi, who is a Democrat, called the deal an important step towards the non-proliferation of nuclear bombs. Supporting the deal, she said that it is a bold and positive work of President Obama for the assurance of peace and harmony in the world and stoppage of proliferation of weapons of mass destruction.[201]

Democrat Senator Harry Reid, currently serving as Senate Minority Leader, said in a statement on 14 July 2015 that the deal was the result of many years of struggle; therefore, Congress had to review it sincerely and with positive attitude.[202] Appreciating the deal, he said that it would stop Iran from getting nuclear bombs.[203] Experts among Democrats not only consider it an act to stop Iran from acquiring nuclear weapons but also a step to reshape the politics of the Middle East. Therefore, they believe that it would be foolish to let go of such a great chance.[204]

On the other hand, the critics of the deal, especially the Republicans, term the agreement hazardous, imperfect, and thoughtless. Senior Republican Senator Lindsey Graham said that the deal would make Iran superior to Israel. He further said that the state of Israel would be at risk because of it.[205] Republican leader and the Speaker of the House John Boehner called it a very bad deal.[206] The Republican Senate Majority Leader Mitch McConnell strongly condemned the deal as having positive and best options for Iran rather than

covering and advancing the US national security goals.[207] Chairperson of Senate Foreign Relations Committee Bob Corker opposed the deal, saying that the US along with the West had given too much room to Iran for its nuclear programme.

Iran's points of view

The President of Iran Hassan Rouhani called the deal a great step of international cooperation with Iran. He said that unnecessary confrontations would lead the international community nowhere, adding that problems would be resolved on the basis of mutual cooperation and collaboration.[208] Iranian Foreign Minister Mohammad Javad Zarif issued a statement saying that the deal had brought a new hope for Iran, which it had to further build on.[209] He added that the deal was in fact a defeat to the Zionist Regime of Israel since the very agreement had isolated Israel from its Western allies.[210] On 12 July 2015, Zarif met the leader of Hezbollah Hassan Nasrallah and said that the deal created an important opportunity for regional cooperation to end extremism and terrorism created by Israel.[211]

Moreover, public in Iran believes that the deal is a sign of peace as well as a great achievement of Iran. People of Iran even took to streets to celebrate the day of the announcement of the deal.[212] On 16 July 2015, the Supreme Leader of Iran Ayatollah Ali Khamenei applauded the negotiators saying that it was a big achievement for them that they converted the negotiations into a permanent deal.[213] He further said to the US that Iran would not change its policies towards the arrogant regime of the US.[214] He termed the deal a great sign of success and said that he could not oppose or reject the agreement in the Supreme National Security Council or the parliament.[215] He accepted and welcomed the deal and strongly praised the struggle of Rouhani.[216] The Islamic Republic News Agency (IRNA) published a report that Iran's nuclear programme was accepted by the world powers, and that becoming nuclear was the right of Iran within the international norms.[217] It further reported that there would not be any sort of pressure over Iran with respect to its nuclear programme after the deal.

On the other hand, some hardliners of Iran opposed the deal and called it a victory of the West over Iran. They criticized President Rouhani as much as President Obama was denounced by the Republicans in the US. Alireza Zakani, a conservative lawmaker, said that it was too early for the people of Iran to celebrate the deal since it would send negative signals to the West.[218]

Views of Israel

The JCPOA was strongly condemned and criticized by the officials of Israel. Israel's Prime Minister Benjamin Netanyahu strongly rejected the deal and termed it a threat to Israel's security. He further elaborated that Israel would not accept the deal by any means, calling it a big mistake of the West.[219] Israel's Deputy Foreign Minister Tzipi Hotovely said that the deal was a historic surrender of the West and Israel would not let it get ratified in the US Congress by any means. Another leader of Bayit Yehudi Party of Israel, Naftali Bennett

clearly opposed the agreement by saying that it would make the period dangerous and hazardous.[220]

Zionist Union leader Isaac Herzog staunchly condemned the deal and said that it would make Iran's position stronger in the Middle East and would allow it to acquire nuclear weapons.[221] Many experts and politicians from Israel believe that it is a failure of the government of Netanyahu and its weak diplomacy with the West. They call it the failure of Prime Minister of Israel in safeguarding Israeli interests in the region. The opposition leader of Yisrael Beiteinu Party Avigdor Lieberman, condemned the agreement and said that it would boost Iran's position in the Middle East. [222]

On the other hand, some officials appreciated the deal and said that it was the best option for the security of Israel. Ami Ayalon, ex-leader of Israel's internal security service Shin Bet, said that the deal is the right choice for Israel and its security. He further said that the deal had driven Iran back from the nuclear path since it was so close to getting a nuclear bomb.[223] Former Director General of Israel's intelligence agency Mossad Efraim Halevy (1998 -2002) said that the JCPOA included certain components which were very much essential for the security of Israel and that an end to the deal would make Iran free to do what it wished.[224]

Stance of the Gulf states

The Gulf states including Kuwait, Oman, Qatar, and Saudi Arabia also appreciated the deal and called it a big breakthrough. Terming the deal a great success, they congratulated the nations who were part of JCPOA. The Arab community believes that the deal would bring stability to the region.[225] Oman actually played an important role for the initiation of negotiations between Iran and P5+1 since Oman has friendly relations with both Iran and the US.[226] Oman had been trying to bring Iran and the West to the negotiating table, and had even offered to launch backdoor channels between Iran and the US for successful negotiations over Iran's nuclear programme in 2009. Eventually Oman was successful in arranging the first secret talks between the US and Iranian diplomats in Muscat in July 2012.[227] Qatar and Saudi Arabia welcomed the deal and called it the best option for regional peace and stability. The government of Saudi Arabia believes that the deal is the only option which prevents Iran from becoming nuclear and also gives a mechanism through which all the nuclear sites of Iran will be inspected, verified, and checked clearly. The deal is also welcomed because it has clauses that would re-impose the released sanctions if Iran was found guilty of violation of any article of the deal.[228] The Secretary-General of the Arab League Nabil Elaraby called the deal a great success and said that JCPOA would result in peace and harmony in the region and ensure stability in the Middle East.[229] On 2 August 2015, the Gulf Cooperation Council (GCC) publicly supported the deal in Doha, Qatar, stating that it would bring peace to the region.[230]

Stance of Pakistan

Pakistan strongly welcomed the deal and said that it would promote confidence building measures and create peace and harmony in the region.[231] Former president of Pakistan Asif Ali Zardari described the agreement as great diplomacy and a triumph of table-talks over confrontation, hostility, and gunboat diplomacy. He was of the view that negotiation was the only solution to the problem.[232]

Experts' views

Experts have criticized as well as appreciated the deal. Experts related to arms control believe that it is a positive step through which peace will be ensured and Iran will be stopped from becoming a nuclear state. They further argue that the deal will slow down the pace of Iran's nuclear programme. But other analysts and experts who have a soft corner for Israel describe it as a dangerous step that invites Iran in the pace of arms race. They are of the opinion that the deal is an actual recognition of Iran's nuclear status.

The Director of the East Asia Non-Proliferation Programme at Monterey Institute of International Studies Jeffrey Lewis has called the deal a positive step in the right direction. He further said that the final deal would slow down the nuclear programme of Iran and compel it to go through verification, monitoring measures, and a cooperation process with the IAEA.[233] Actually, the deal does not change the US-Iran relations but brings them on one point over the nuclear issue of Iran.

Senior fellows at the Centre for American Progress, Lawrence Korb and Katherine Blakeley, maintain that the deal is the best option.[234] They have called it an excellent step for the US specifically and the international community in general. They further wrote that it prevented Iran from continuing its nuclear programme since it closed the ways and paths of Iran that could be used to build up enough nuclear material to make a nuclear weapon. They appreciated the terms of the deal that compelled Iran to be the subject of different IAEA verifications.

Another senior research physicist and professor of the Programme on Science and Global Security at the Princeton University Frank Von Hippel called the deal a milestone in the political structure of the world. He said that for the sake of sanctions relief, Iran had stepped back from nuclear enrichment.[235] He further maintained that the nuclear programme of Iran needed to be taken seriously even after ten years because the nuclear arm race in the Middle East could escalate to the dangerous phases of nuclearization.

Former CIA analyst Fred Fleitz's statement, analyzing the provisions of the agreement, said that the deal had given too much to Iran. He argued that Iran would easily meet the terms and conditions of the deal and would later develop advanced centrifuges to easily get back on the nuclear track.[236]

Siegfried S. Hecker of the Centre for International Security and Cooperation at Stanford University described the agreement as the best alternative. He argued that Iran had agreed on many areas to restrict its nuclear

programme.[237] He appreciated the deal saying that the international community would collectively respond in case of violation of the agreement on Iran's part.

Zia Mian of the Programme on Science and Global Security at Princeton University said that the deal provided three essential lessons which would ensure peace and harmony in the world: First, it opened the way for successful nuclear diplomacy which was necessary to create a common ground for negotiations and table-talks. Second, JCPOA has been concluded despite a lot of criticism from within the US, Israel, Gulf States, and Iran. Concluding a successful deal in a tense situation amid internal criticism is a political milestone in world politics. Third, nuclear disarmament problems cannot be dealt with by one state alone. Therefore, it is a process that requires involvement of different powers. [238]

Approval of the draft of JCPOA by the UNSC

On 15 July 2015, the US Ambassador to the UN Samantha Power forwarded the draft consisting of 14 pages to the United Nations Security Council (UNSC) for approval.[239] It was finally approved unanimously in a 15-0 vote by the Council on 20 July 2015 under the UNSC Resolution 2231.[240] The resolution was supposed to take 90 days for implementation to give time to US Congress for consideration and deliberation under the Iran's Nuclear Agreement Review Act of 2015. Moreover, the resolution also created a mechanism for lifting the seven sanctions, which had been imposed by UNSC.[241] However, ballistic missile technology ban and the arms embargo of UNSC would retain their own places. Moreover, the said resolution of the UNSC would have nothing to do with the sanctions separately imposed by the US and European Union. The hardest part of the resolution for Iran was that it codified the terms of snapback mechanism of the deal by virtue of which all lifted sanctions would be re-imposed automatically if Iran would be found guilty of violating the agreement.[242]

When the voting process was over, Samantha Power told the Security Council that sanctions will be lifted on Iran after it would meet all its obligations. In addition to this, she asked Iran to free all under arrest Americans who were imprisoned in Iran, such as: Amir Hekmati, Saeed Abedini, and Jason Rezaian.[243] On the day of the approval of resolution by UNSC, the European Union held a meeting of Foreign Affairs Council in Brussels where they sanctioned the JCPOA following which the EU member states started lifting the sanctions on Iran. However, the sanctions of EU with respect to forbidding the export of ballistic missiles technology, and the sanctions related to abuse of human rights were not lifted forthwith.[244]

Public debate in Iran and the US

People in general have different views regarding the JCPOA. There are two schools of thought. The ones who are anti-Iran believe that Iran has been recognized as a nuclear power; and that the current deal has encouraged Iran to slowly progress further. They consider Iran as the beneficiary of the deal. They believe that the deal did not end the nuclear dream of Iran but gave it a green

signal to continue further with a ten or fifteen years pause. The deal was strongly condemned in Israel where anti-Iran people took to the streets. Israeli propaganda continued through media in order to pressurize the West and the US to impose harder strings so that Iran's nuclear programme could be dismantled permanently. The American Israel Public Affairs Committee constituted an informal body called Citizens for a Nuclear Free Iran. The body continued propaganda through advertisements against the deal in order to create public agitation.[245] Another group, United Against Nuclear Iran (UANI) severely condemned the deal and called it completely foolish to allow Iran in the nuclear club.[246]

On the other hand, a huge number of people appreciated the deal and some even labelled it as the biggest diplomatic breakthrough ever. This school of thought believes that the agreement ensures peace in the region and ends hostility between Iran and the West to a large extent. The deal, according to its supporters, not only ends the political crisis between Iran and the West but also discourages the nuclear proliferation programme of Iran. They further argue that it brought Iran under strict terms and conditions to obey the rules and regulations of IAEA and NPT. The National Iranian American Council (NIAC) termed the deal a great success of negotiators. NIAC said that the negotiators of the deal successfully concluded the agreement which apparently halted Iran's nuclear programme. They suggested to Congress to further strengthen the deal since it had come to the final stage with a lot of hard work. The NIAC, with the help of different advertisements in media, tried to win public support in favour of the deal.[247] It also forwarded a suggestion to the Congress that in order to stop the war permanently between Iran and the West, the deal ought to be implemented in good faith and with honest intention. A great number of former US ambassadors consider the deal a great success. They believe that if the deal is implemented in true spirit, it would stop Iran from the proliferation of nuclear weapons, bring peace and stability to the Middle East, secure the security interests of the US in the region, and check the arms race in the world.[248] A good number of scientists from the US issued a statement on 8 August 2015 in which they congratulated President Obama on his great, inventive, rigorous, and West-oriented deal with Iran which not only ended a nuclear arms race in the Middle East, but also protected US interest.[249]

Even the military cadre of the US is divided over the deal. A good number of retired military officers staunchly endorsed the agreement and forwarded a letter titled 'The Iran Deal Benefits US National Security' on 11 August 2015 in which they said that the deal was truly aimed at halting the nuclear programme of Iran. They further said that it would be a diplomatic opportunity for Iran to stop its nuclear path; otherwise it would be justified for the US to use the military options against it after its failure in complying with the agreement.[250] On the other hand, a group of retired military officers showed displeasure with the deal and said that it did not completely halt Iran's nuclear programme, and rather gave it a recognized way to obtain nuclear weapons.[251]

The deal has also been under discussion in Iran where a majority of people supported it and said that it had opened the way for Iran to trade with the

international community. They are of the view that the economy of Iran would get a boost when the sanctions are released; therefore, the deal is essential for saving it from isolation in world politics. There was also a strong domestic condemnation of the deal, but Iran's President Hassan Rouhani paid a deaf ear to the criticism and continued to do what he considered the best for his country.[252] He further said to the hardliners that Iran had no option; it had to choose either to get out of economic crises or continue nuclear confrontation with the West which was never going to end. He said that oil export and access to the international banking system were blocked and Iran had been isolated in world politics. Most people in Iran believe that in this modern era, Iran cannot afford to engage in a fruitless confrontation with the West. Therefore, they think that the ones who oppose the deal would fall in the category of extremists.[253] Most human rights activists and intellectuals in Iran appreciated the deal and said that it would decrease the political and economic gap between Iran and the West and would create conducive relations between them.

Implementation of JCPOA

The successful conclusion of JCPOA between P5+1 and Iran made many believe that almost the entire international community was on a single page with respect to peace, nuclear proliferation, and arms race. Therefore, the international community applauded the efforts of the US and hoped that it would show sincere efforts for the true implementation of JCPOA. In order to ensure the proper and timely implementation of the deal, the Obama administration brought JCPOA to US Congress on 19 July 2015 to get it approved.[254] The deal was reviewed and discussed in the US Congress under the terms and conditions of Iran Nuclear Agreement Review Act of 2015 which had been concluded on 22 May 2015.[255] After the submission of JCPOA, the US Congress had 60 days for the review during which it could approve or disapprove it.[256] Keeping in view the Republicans' majority vote against the approval of the deal, President Obama said that he would veto any such disapproval.[257] But the US president could maintain his veto power if he had the support of 34 votes in the Senate and 146 votes in the House of Representatives.[258]

During the period of review, hot debates over the deal opened up, not only in Congress but also among US public. The Republican leaders tried their best to get the deal rejected as they believed that it would officially recognize Iran's nuclear programme. They further viewed the deal as ill-planned, not covering all aspects of cutting off Iran's nuclear ambitions. Therefore, they wanted the Obama administration to avoid lifting of the sanctions. On the other hand, the deal also had a good number of supporters in the US Congress creating problems for its approval or rejection from both the houses. The review period, which ended on 11 September 2015, was marked by a failure of the resolution with a vote of 269 nays (25 Democrats and 244 from Republicans), and only 162 ayes, which all came from Democrats.[259]

On the other hand, Iranian government also faced similar resistance in getting the JCPOA approved in the parliament where the hardliners strongly criticized it. They argued that the deal put the sovereignty of Iran at risk.[260] The

president of Iran, however, staunchly supported it as the need of the time for the recovery of Iran's economy, and called for an internal compromise on it to reach a final settlement with the West.[261] Nobody could doubt the sincere efforts of Iran when it even prohibited all media men, officials, and the analysts from criticizing the JCPOA.[262] Through the efforts of the Iranian government, the parliament of Iran eventually approved the deal on 13 October 2015, despite strong pressure from the hardliners, by a vote of 161 in favour and 59 in opposition, with 13 parliamentarians being absent.[263]

To save the sincere efforts and commitments of Iran and the EU from going to waste, the Foreign Minister of Iran Javad Zarif along with the High Representative of the European Union for Foreign Affairs and Security Policy Federica Mogherini, jointly declared the "Adoption Day" of the deal on 18 October 2015.[264] On the same day, it was expressed by all parties that JCPOA would soon be implemented.

The long wait came to an end on 16 January 2016 when, despite strong opposition from the Republicans in the US and the hardliners of Iran, implementation of the JCPOA was finally announced by Zarif and Mogherini in Vienna after the satisfactory report from IAEA.[265] Moreover, the report of IAEA confirmed Iran's compliance with all the terms and conditions of JCPOA. Soon after the announcement of the Implementation Day, the EU, the US, and the UN lifted the nuclear-related sanctions against Iran.

Although the implementation of JCPOA was warmly welcomed by the officials of Iran and the peace-loving nations of the world, on 17 January 2016 the US imposed some new sanctions on the companies of Iran on the pretext of Iranian involvement in testing of ballistic missiles.[266] It has to be noted that these new sanctions were imposed only a day after the US, UN, and EU lifted all sanctions related to the nuclear programme of Iran. This demonstrates the non-seriousness of the US in getting the issue resolved peacefully.

Positive impacts of JCPOA for Iran

Economic impacts

The deal not only ends the political tensions between Iran and the West, but also allows the former to take part in international trade in the world market. Iran, which holds 10 per cent of the world's oil and 18 per cent of its natural gas reserves, would be very much beneficial for the international community to trade with.[267] The deal allows Iran to export its oil to Europe, which benefits both the West and Iran.[268] Foreign investors would invest in technologies and industries in Iran for the refinery process of oil and natural gas. Multinational companies and foreign firms would be allowed to invest in Iran since Iran has a great energy market. The details of sanctions relief are as follows:

- The UN or EU will not impose new nuclear-related sanctions on Iran.
- When IAEA publishes the satisfactory verification report with respect to compliance with the nuclear-related measures by Iran, the UN will terminate all its sanctions, the EU will

terminate some sanctions and other will be suspended, and the US will stop the application of its nuclear-related sanctions against Iran.[269] This was achieved with the implementation of JCPOA in January 2016 as per the earlier expectations.[270] Iran's foreign assets worth around US$100 billion frozen in foreign banks were also released following the announcement of implementation of JCPOA.[271]

- The sanctions imposed on Iran in relation to ballistic missile technologies will continue for eight years. On the other hand, the sanctions which are enforced on conventional weapons sales to Iran may continue for five years.[272]
- EU would lift a good number of sanctions against Iranian companies and institutions, including Revolutionary Guards after eight years into the agreement.[273]

Through the said agreement, the US will not lift the sanctions connected to human rights abuses, missiles, and terrorism support.[274] The sanctions of the US are stricter as compared to the sanctions of the EU.[275] Furthermore, it was agreed in the deal that if Iran was found violating the agreement, the sanctions can be re-imposed by any of the P5+1.[276]

Basically JCPOA aims to settle Iran's nuclear-related issues with the Western countries through the following process:

If any member believes that the other party of JCPOA is not complying with the terms of the agreement, the complaining party may take the issue to the Joint Commission.[277] If the complaint has been carried to the Joint Commission by any opposing members of Iran, and is not resolved in accordance with the satisfaction and wishes of complaining member within 35-days, the concerned member may term the issue unresolved and will stop to perform its commitments under JCPOA by notifying the UNSC that JCPOA is not effective. Within 30 days, UNSC will pass a resolution for the purpose of lifting more sanctions.[278] If the UNSC fails to adopt the resolution within the said period, all nuclear-related sanctions of the pre-JCPOA will be automatically re-imposed. On the other hand, Iran clearly stated that in such cases, Iran will stop to comply with the nuclear deal.[279] The aforementioned rule simply means that any one of the five permanent members can veto the sanction relief but no permanent power will deny the re-imposition of sanctions.

The Executive Director of the Foundation for Defense of Democracies (FDD) in Washington Mark Dubowitz opposed Iran's views that on such grounds Iran would stop to follow the terms of deal as, on the other hand, the US would be unwilling to enforce a "snapback" for minor violations. If the violation on the part of Iran would be serious, the issue would be taken to the UNSC; otherwise for minor violation, no sanctions would be re-imposed.[280]

Political impacts

In the 1950s, the US established cordial relations with Iran. After the 1958 revolution of Iraq, which was anti-Western, the US aided Iran militarily by strengthening its defensive potentialities. When Cold War entered the Middle

East, Iran's importance was further boosted in the US point of view. As a result, the US continued to sell weapons to Iran for its defence. In the 1960s, US developed cordial political relations with Iran for the sake of its dominance in the Persian Gulf.

During the reign of Shah Mohammad Reza Pahlavi (1941-1979), US-Iran relations were further strengthened. US had interest in Iran because it shared a long border with the USSR and was also the most dominant power in the Persian Gulf through which US could strengthen its foreign policy in the Middle East. Shah Mohammad Reza Pahlavi received diplomatic support and financial aid from the US during the Cold War. US forces were stationed in different cities of Iran; in return Iran was guaranteed every kind of security.

In 1963, Pahlavi even tried to Americanize all of Iran through the White Revolution. It included the grant of right of votes to women, growth of industries, development and enhancement of health facilities, building of schools, expansion of transportation, land reforms, and construction of roads, railways and airports. It was carried out with the help and friendly cooperation of the US.

The friendly relations experienced a massive setback when Islamic Revolution took place in Iran in 1979. The converging interests of the US and Iran converted into diverging interests. Their friendly relations turned into bitter relations. The mistrust, misconception, and confrontation between both states took a serious turn which Iran had to pay the price for. Iran was politically and economically isolated and socially cut off. Iran was forced to dismantle its nuclear programme which it insisted to be for peaceful purpose. After a confrontation of three decades over the nuclear issue of Iran, finally Iran and the West concluded JCPOA which politically relieved Iran. After the successful conclusion of the deal, Iran would enjoy friendly relations not only with the US but also with the European states. Britain re-opened its embassy in Iran which was shut down when Iranian mobs attacked it in 2011.[281] British-Iranian relations have considerably improved after the arrival of Hassan Rouhani as president of Iran. The deal further boosted the diplomatic relations where both countries have developed mutual trust to resolve their problems peacefully.

Positive impacts of the deal for Middle East and South Asia

Nuclear confrontation between the US and Iran also has serious implications for the political and economic structures of the Middle East and South Asia. Moreover, in case of a future confrontation between Iran and the US, the latter would want to station its forces either in the Middle East or in South Asia to try to dismantle or seize the nuclear materials of Iran. Any kind of resistance from Iran might cause disturbance for the said regions. The nuclear confrontation between Iran and the US would possibly spread in the entire region of Middle East and South Asia.

Keeping the direct consequences of a nuclear confrontation between Iran and the US in mind, the neutral states of the two regions want a permanent solution to the problem. Therefore, the deal is the best option for the region. A

majority of states of the region warmly welcomed the deal and drew the attention of the signatories towards its sincere and quick implementation. Positive impacts for the Middle East are as follows:

- The JCPOA would put to an end the series of allegations and counter-allegations between Iran and the West;
- The deal would help in weakening the arm race and nuclear proliferation in the region;
- Middle East, which is an oil-rich region, will enjoy trade with international community without any disturbance;
- International firms and companies will be allowed to invest, which ultimately benefits the region;
- Peace will be ensured.

If Iran had been allowed to acquire nuclear weapons, the balance of power in the region would have been disturbed and other smaller states would have got encouraged to initiate their own nuclear programmes. Thus, the possibility of nuclear bombs transferring to the hands of extremists and terrorists would have exacerbated.

Conclusion

The JCPOA has been welcomed by the peace-loving nations of the world since it brought the West and Iran to an agreement on peaceful resolution of the dispute over the nuclear programme of Iran. Moreover, Iran has resolved to limit its nuclear programme for the period of ten years for the sake of its economy because it was burdened by sanctions. The conclusion of nuclear deal between the P5+1 and Iran would pave the way for peace and stability in the region. Therefore, the neighbouring states of Iran, including Pakistan, have strongly welcomed the deal and asked the signatories for its sincere implementation.

However, another substantial pressure group of experts and politicians within Israel and the US strongly condemned the deal, saying that it would officially recognize the nuclear programme of Iran. They believe that Iran would easily meet the terms of the deal and would soon register itself in the nuclear club which would ultimately disturb the balance of power in the Middle East.

Although the deal was implemented in January 2016, from the oppositions' vote and resistance in US Congress against the deal, there is a growing apprehension that implementation of the deal might face resistance in the US. But one has to realize that the ultimate solution of any issue would take place at the negotiating table. Therefore, the Republicans need to cooperate with the US president for approval of the deal. There is no denying that fact that the deal would not only end the hostile relations of US and Iran but would also ease the tension of the region. Therefore, the peace-loving nations have to play their role for successful implementation of the deal from both sides.

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STEADYING THE DIFFICULT POISE: SINO-PAK EFFORTS TO COUNTER THE GROWING US ROLE IN SOUTH ASIA

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Introduction

Pak-China bonhomie is no secret in international politics. While it serves Chinese strategic interests in the region, it also tends to counter the oft-hypothesized 'negative' American interference in South Asia. The sub-continent is a unique region in many respects. It is home to two new nuclear powers, Pakistan and India, who have fought three full-scale and two half wars, neighbouring two superpowers, Russia and China. Presence of religious and sectarian extremist tendencies, the burning issue of Kashmir, and continuous antagonistic posturing between India and Pakistan further complicate matters. In such a volatile and conflict-prone region, regional stability is a delicate balancing act. Any skewed behaviour from regional or international players may disturb the tantalizing balance.

This is a dangerous setting, which demands careful behaviour from all concerned. Any untoward event may send the region reeling into the throes of yet another full-scale war with a real danger of going nuclear. Within this environment, the unusual recent growth of camaraderie between India and the US is perturbing. One way to counter the situation is to boost Pak-China relationship. In this regard, this paper attempts to see China-Pakistan strategic partnership vis-à-vis Indo-US long-term cooperation. It also aims to explore whether both these interactions are providing a balancing influence in the region. Also, as an extension, this paper divulges multiple strategies of hard balancing between India and Pakistan which seem to maintain stability in the region.

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The context

Considering the intricate dynamics of South Asian politics, where both India and Pakistan are proactively engaged in 'hard balancing' strategies to advance their respective national interests, risk of an armed clash is always imminent. India enjoys superiority over Pakistan in conventional military strength, which is supplemented by its strategic partnership with the US. Continuous sales of modern and sophisticated American weapons to India invigorate Indian military power which may adversely affect the already fragile regional balance of power. Consequently, this imbalance in military prowess of the two countries may lead both nuclear rivals to brinksmanship. In this backdrop, Pakistan-China relations appear to be a balancing strategy against Indo-US strategic partnership. As Afridi and Bajoria argue, "Beijing clearly sought to build up Pakistan to keep India off balance."[1] Despite the fact that the US lashed sanctions against Pakistan because of the latter's nuclear pathway, China has continued its military support to Pakistan; an example of their sustained strategic ties. Sino-Pakistan joint collaboration now includes joint military exercises, personnel training, intelligence cooperation, and joint counter-terrorism efforts. Pakistan has also made headway in nuclear development with the help of Chinese counterparts, and in hi-tech procurements from the latter like short-range and medium-range ballistic missiles.[2] In April 2015, three weeks before Chinese President Xi Jinping's visit to Islamabad, Pakistan's Prime Minister Mian Muhammad Nawaz Sharif approved a deal of purchasing eight submarines from China worth US$5 billion.[3] With this deal, it is expected that "Pakistan Navy will gain a competitive advantage in their underwater fighting capability."[4]

China not only supplied weaponry to Pakistan, it has also contributed to enabling Pakistan to develop conventional arms indigenously. Sino-Pakistan joint production of Al-Khalid tank, JF-17 Thunder fighter aircraft, and the development of Hatf, Shaheen, and Ghauri long-range ballistic missiles are a few examples in this regard. They seem to help maintain balance of power and preserve peace and stability in the region. Another milestone in non-conventional security is China-Pakistan Economic Corridor (CPEC) which is expected to extend Sino-Pakistan strategic influence beyond South Asia to the Middle East and Central Asia.

Steadying the balance of power in South Asia

Balancing the Indian hegemonic designs is a hard job for Pakistan. Despite reaching nuclear parity with India, Pakistan still lags behind in missile technology and conventional weapons. If missile technology is sine qua non for maintaining minimum credible nuclear deterrence, the conventional weapons are equally crucial for any country, particularly to combat non-state actors. There is an urgent need to modernize Pakistan's conventional warfare capability as the country is fighting a war against terrorism and facing multiple other challenges.

Due to Pakistan's traditional dependence on American weaponry, it could not excel in indigenous arms industry. Although Pakistan established Pakistan Ordnance Factories in early 1950s,[5] it has not been able to compete

with the growing Indian military might. Pakistan seems to have reached a decent level of indigenous arms with the production of JF-17 Thunder fighter jets, Mushshak and Super Mushshak trainer aircrafts, and Al-Khalid and Al-Zarrar tanks produced in various locations throughout Pakistan.[6]

The military and economic aid coming from the United States is considered to have been used largely in fight against terrorists and militants.[7] The US kept Pakistan highly dependent on its arms and even imposed arms embargoes historically. While on the other hand, China being a faithful ally and friendly neighbour, always supported Pakistan to strengthen its security against internal and external threats. Akram Zaki, Pakistan's former Ambassador to China, in an interview to the media about strategic partnership between Pakistan and China stated, "In ideological terms, China wants peace and stability in South Asia, but that is only possible if the imbalance created by the United States' extraordinary support to India is to some extent corrected."[8] For Zaki, China's strategic philosophy is to make Pakistan self-sufficient in the production of defence equipment as far as possible.

In response to growing modernization of Indian military machinery, Pakistan is also making an effort to upgrade its military. Compared to conventional weapons, Pakistan has put a good deal of effort into the nuclear and missile technology which can offer some credible deterrence against potential threats. China stands as Pakistan's principal arms supplier.[9] Pakistan's purchases are pocket-sized in comparison to Indian defence procurements though. India views itself as a rising regional player and considers military strength a crucial factor in its quest for regional ascendance. Conversely, Pakistan is vying to catch up with India to deter any threat from it. Pakistan cannot match India's military power man-for-man or gun-for-gun but Pakistan's huge investment in technological weapons and modernization of its armed forces would present an effective challenge to the enemy.[10]

India's conventional military superiority over Pakistan largely owes to its hike in defence expenditure over the past three decades. Its defence expenditure is six to seven times larger than that of Pakistan.[11] Between 1990 and 2003, Indian ability to combat offensively has outpaced Pakistan remarkably with 3:1 high performance aircraft numerical advantage. Other technological advancements in warfare technology like wide-area communications and reconnaissance are much better than Pakistan's. Asymmetry of economic resources and limited choices to acquire modern technology has slackened conventional modernization of Pakistan's armed forces. This imbalance in conventional weaponry raises strong concerns about the outbreak of another conventional war between the two countries or leading to brinksmanship on the part of India. In view of aggressive Indian policies, there is a possibility of a pre-emptive Indian air campaign against Pakistan as envisaged in the Cold Start Doctrine. In such a scenario, Pakistan's conventional and nuclear power will have to be sufficiently capable of deterring Indian conventional superiority. Since 1960s, India's defence establishment has carved out a policy to deal with Pakistan and China simultaneously by declaring two-front war strategies.[12]

Indo-US strategic defence relations

India's relations with the US have not been great historically, but a recent convergence of their interests has brought them together in a strategic partnership. Indo-US cooperation in the fields of economy and defence has experienced an agile up-thrust in the last 15 years or so. Former US president Bill Clinton's visit to India in March 2000, proved ground-breaking in cementing mutual ties at a rapid pace. The subsequent Bush administration ameliorated mutual relationship further. It changed US stance towards China, categorizing it as a 'strategic competitor' rather than a 'strategic partner'.[13] The then US deputy secretary of state Richard Armitage visited India in May 2001 to inform his counterparts about President Bush's strategic framework that included missile defence programme and terrorism.[14] India-US strategic cooperation grew further with the signing of the General Security of Military Information Agreement (GSOMIA) in January 2002, a non-agreement on which was earlier seen as an impediment in defence cooperation. By signing GSOMIA, India got greater access to dual use technology, which further expanded sale of US arms to it.[15]

Building Indian military power

India clinched an arms deal with the United States in April 2002 for acquiring Raytheon System AN/TPQ-37 (V) 3 Fire-finder artillery locating radar systems. Thereafter, a subsequent deal included GE F404-GE-F2J3 engines and advanced avionics for India's indigenous Light Combat Aircraft (LCA) project.[16] Furthermore, negotiations for the sale of P-3 Orion naval reconnaissance planes to India were initiated. For updating and modernizing its Special Forces, India bought a lot of military equipment, and used the Indo-US strategic partnership as a tool to balance China and bring about a global balance of power. Under Bush administration and then under the Obama administration, the US has been seeking a 'sustainable strategic partnership' with India. Although India has evolved strategically cooperative relationship with China, it is still wary of the latter's military modernization and its implications for regional security environs. The most important advancement in Indo-US strategic partnership came with the '10-year Agreement', which further consolidated India-US defence ties. Under this agreement both the countries would extensively engage in joint production and cooperation on missile defence. It would also step up efforts to conduct joint military exercises and expand cooperation in peacekeeping operations to further regional stability. This multifaceted cooperation includes 'The 2006 Indo-US Framework for Maritime Security Cooperation' under which challenges of maritime threats, transnational offences, proliferation of nuclear weapons, environmental protection, and natural calamities will be addressed.[17]

US President Barack Obama defined Indo-US strategic partnership as partnership of 21st century and a priority of US Department of Defence.[18] United States has declared India as a natural partner on the basis of shared interests and values. United States is struggling hard to ramp up Indian defence capability and has emerged as a reliable and transparent arms supplier to India, which is

evident from deep-rooted security engagement. Since 2002, India has signed more than 20 foreign military sales agreements for procurement of defence articles and services such as C-17 and C-130J aircraft, TPQ-37 radars, Self-Protection Suites (SPS) for VVIP aircraft, specialized tactical equipment, Harpoon missiles, Sensor-Fused Weapons, and carrier flight and test pilot school training.[19]

In a short time India's foreign military procurements have reached a total value of approximately US$6 billion, and are likely to rise in future.[20] C-130Js were delivered to India in February 2011. These aircrafts have already been successfully employed to provide critical humanitarian assistance. Additionally, US Air Force gave training to more than 100 Indian Air Force personnel. After concluding the C-17 pact with the US, India would establish the second largest fleet of C-17s in the world. Indian navy also received updated technological weaponry to furnish its warfare skills. It has received an upswing by adding the amphibious transport dock, also called a landing platform/dock (LPD), INS Jalashwa, which was transferred in 2007. Educational exchange programme of military staff between the two countries has also expanded dramatically. India has over fifty defence laboratories. The network is being further enlarged by implementing an agreement signed in 2011, which would extend areas of joint research and acquisition of technology. Mutual cooperation further includes power and energy, micro-aerial vehicles, and human development. Indo-US defence cooperation over the last five years is much more robust and rigorous in comparison with bilateral defence cooperation between other countries. US government is committed to ramp up this defence cooperation with India by increasing people-to-people contacts, military-to-military ties, and implementing shared agreements on security, counter-terrorism, and arms production.[21]

US and Indian navies participated in five-nation joint exercises held in September 2007 in the Bay of Bengal with the navies of Australia, Japan, and Singapore. The exercises involved 25 ships, more than 20,000 personnel, and 150 aircraft. The primary objective of the exercises was to train in antisubmarine warfare, counter-piracy, and disaster response. The exercises evoked strong criticism from Beijing because it considered the multilateral venture as aimed at China.[22] Indian and US militaries have conducted 56 cooperative events in fiscal year 2011. India is conducting more military exercises with the US than any other country. All the aforementioned events and the nature of joint ventures have led Washington to expect India to play a significant role regionally and globally. Former US secretary of state Hillary Clinton stated in October 2011, "United States is making a strategic bet on India's future—that India's greater role on the world stage will enhance peace and security."[23] Former defence secretary Leon Panetta's characterization of India as a 'linchpin' for 'rebalancing' towards Asia Pacific was part of a new defence strategy of United States.[24] Indian Air Force has shown considerable superiority over Pakistan's Air Force, but for India there is another challenge and that is from China's air-power. Indian military strategists are planning to increase Indian Air Force's expeditionary capability so that it can extend power from the Red Sea to the

Strait of Malacca. Indian Air Force is preparing to achieve the capacity to combat Pakistan and China simultaneously. To accomplish this challenge, it is trying to replace old platforms such as Mig-21, Mig-23, and Mig-27.[25]

India's large procurements of weapons from the US during last decade have had a considerable impact on modernization of Indian military. India's arms shopping spree worth US$4.8 billion includes trainers, amphibious ships, maritime-patrol aircraft, and transport aircraft (ten huge C-17s). Another purchase of six C-130s costs another billion dollars. India's purchase of 126 modern jet fighters from France in a mega arms deal worth US$20 billion even annoyed the White House. India is also about to buy 22 AH-64D Apache Longbow attack helicopters, more than 1,300 Hellfire missiles, and advanced radar systems. It would provide India a battle-tested system which is effectively used by the US, UK, and Israeli forces.[26]

India is also developing a ballistic missile defence system to safeguard against any nuclear attack through ballistic missiles. India has developed long-range ballistic missiles that can now reach Beijing. The following table shows the missiles India developed with technical support from the US, Russia, and other great powers.

Table 1

India's ballistic missile arsenal[27]

System	Status	Range	Propellant
Prithvi-2	Operational	250 km	Liquid
Prithvi-3	Development	350 km	Solid
Dhanush	Testing	350 km	Liquid
Sagarika/K-15 (SLBM)	Testing	700 km	Solid
Agni-I	Operational	700 km	Solid
Agni-II	Operational	2,000 km	Solid
Agni-IV	Tested	4,000 km	Solid
Agni-V	Testing	5,000+km	Solid
Agni-VI	Development	8,000-10,000 km	Solid
K-4	Testing	3,000 km	Solid
K-5 (SLBM)	Rumored Development	5,000 km	Solid

Source: http://www.armscontrol.org/factsheets/missiles (Edited for this paper)

More recently, Indian missile defence system has received a boost in the wake of latest technological and technical assistance from other countries including the US. 'Agni-V' missile, tested last year, can reach deep into China and is said to be a crucial achievement for Indian missile programme.[28] Much of India's nuclear strategy focuses on improving delivery vehicles. India is aiming to complete a 'nuclear triad'—a system that would allow nuclear weapons to be delivered from air, land, and sea. India's nuclear-powered submarine named 'Arihant' was tested in 2009, but there are no formal reports of making it operational. Indian fighter jets are another vehicle for launching nuclear weapons, but it is not yet clear whether Jaguar IS/IB, Mirage 200-H, and Sukhoi-30 MKI models are capable of carrying nuclear payloads. Indian security expert Bharat Karnad said, "the tests had impact on Pakistan, a nuclear power that has fought three wars with India. New Delhi's shorter-range ballistic missiles already cover Pakistani territory."[29]

Pak-US relations

International relations are based on both and long- and short-term interests of respective countries. These interests keep changing, hence the international relations. In this connection, Pak-US relations have always experienced a topsy-turvy ride. From the roller coaster of 'non-NATO allies' to a rather sedate strategic partnership—with intermittent currents of strategic partners, partner of security alliance, forerunners of war against terrorism, and episodes of mutual distrust—there has been a long history of mutual benefits and love-hate paradigm between the two countries. Two episodes after 9/11 marked the lowest ebb of relations between the two countries. One was the Salala incident in 2011 when the US-led NATO attack on two Pakistani check posts along Pak-Afghan border resulted in the death of 25 Pakistani soldiers. The other was in May 2011 when US helicopters carried out an operation in a Pakistani town Abbottabad—without clear permission from Pakistani authorities—killing Osama Bin Laden and his aides.

Pakistan experienced at least three periods of mutually beneficial relations between the two countries: 1960s, the Ayub era; 1980s, the Russian invasion of Afghanistan; and 2000s, as a frontline partner in the war against terrorism. In all these years Pakistan received assistance from the US in various forms. This assistance came in the form of varied financial support, supply of military hardware, cooperation in military training and law enforcement, counter-insurgency support with the creation of counterinsurgency fund, aid in development sector in terms of infrastructure, trade and energy projects, international humanitarian assistance, and support in getting funding from international donor agencies like IMF, Asian Development Bank and the World Bank.[30]

Despite the foregoing, Pak-US relations are "fluid at present, but running a clearly negative course: still based on several national interests shared by both countries."[31] The common perception in Pakistan has never been favourable about the US, especially after the withdrawal of Soviet forces from Afghanistan. Many Pakistanis believed that the US left them in the lurch once their interests had been fulfilled by defeating the Russians in their backyard. The events before and after 9/11—the Kargil crisis of 1999, heavy restrictions after Pakistan went nuclear, incidents like Salala, Raymond Davis, and the killing of Bin Laden in Pakistani territory without its prior knowledge etc.—did not help either.

There has been an avid understanding in the US policymaking circles of "troubled and even deteriorated U.S.-Pakistani relations, as well as the need to balance Pakistan's importance to U.S. national security interests with U.S. domestic budgetary pressures."[32] The negative perception in Pakistan towards the US is very high and strongly unfavourable as well. Many Pakistanis do not put the US in friends' circle and harbour very negative emotions towards it.[33] Similarly, an alarmingly low number of US citizens, only 2 per cent, considered Pakistan an 'ally' in a survey conducted soon after the killing of Osama Bin Laden.[34]

There is no doubt, however, that the US provided significant amount of aid to Pakistan, which fluctuated widely since the latter's independence though. The post-2001 US assistance programme for Pakistan has seen notable accomplishments, not least in the area of humanitarian relief related to the country's devastating 2005 earthquake and 2010 floods. US aid has measurably improved Pakistan's energy, health, and education sectors, bolstered its infrastructure, and facilitated better governance and gender equity.[35] In the security realm, US assistance has provided Pakistan's military and law enforcement agencies with equipment and training that has improved their capacity to combat the country's indigenous terrorism threat. It has also contributed to successes realized by the Pakistani military in offensive military operations undertaken in tribal areas, and enabled Pakistan to better support US-led military operations in Afghanistan. Pakistani law enforcement agencies have received equipment and training from the US.

Pak-China defence cooperation

Technology is part and parcel of military strategy. To strengthen military capability against potential threat is indispensable. In this age of nuclear weapons, conventional arms have lost their significance but it never means they are irrelevant or obsolete. Conventional weapons are still important to respond to intra-state or inter-state security threats. Conventional weapons are becoming far more lethal and sophisticated. Military analysts speak of military-technical revolution that is ushering in weapons with dramatically enhanced capabilities. New military technologies are gradually narrowing down the difference between conventional weapons and weapons of mass destruction. A number of new conventional weapons are of dual use. They can carry chemical, biological, and nuclear weapons. Modern conventional weapons with more devastative capability and accuracy can annihilate on a large scale.[36]

Pakistan has been dependent on weapons from the US and European countries historically, but after experiencing arms embargoes during war times with India, Pakistan realized that it should achieve self-sufficiency or at least reduce dependence on unreliable partners. China stepped in to fill that gap for Pakistan. Not only this, China enabled Pakistan to produce weapons indigenously. Some of the productions are joint ventures between China and Pakistan.

Al-Khalid main battle tank

After realizing that internal balancing is more reliable than external balancing, Pakistan also established conventional military hardware indigenously. Al-Khalid, also known as main battle tank-2000 or MBT-2000, refers to the Pak-China version of a modern main battle tank, which was jointly developed by the two countries in 1990s. Al-Khalid was handed over to Pakistan Army in 2001 and is part of Pakistan's main battle tank fleet. China deals with customers of MBT-2000 internationally. Many regional and international clients show keen interest in purchase of these tanks. Al-Khalid was developed on the lines of Chinese MBT Norinco Type-90-II, but is produced in Pakistan. Ukraine

is another partner in the production of Al-Khalid tank.[37] Its engine, Ukrainian 6TDF, is almost the same engine used in T-80/84 tanks. It is more sophisticated than other modern tanks with a maximum weight of 46 tons. Pakistan's defence production has risen to a level where it can export indigenously produced weapons. The defence production is likely to double as Pakistan plans to earn foreign exchange for national development. Pakistan is primarily focusing on main battle tanks, Al-Khalid and Al-Zarrar, Armoured Personnel Carrier (APC) Al-Saad, Al-Muhafiz security vehicle, the Baktar Shikan anti-Tank guided missiles, Super Mushshak K-8 trainer aircraft, missile boats, small arms, and a wide range of artillery. Pakistan's defence exports can be dramatically increased by exporting Al-Khalid and JF-17 fighter aircraft, developed jointly by China and Pakistan. Pakistan's defence products may not be as advanced but are more cost-effective and affordable for client states. Al-Khalid is said to be amongst the best tanks in the world. It features night-time attack capability and system to automatically track enemy tanks. Pakistani military experts compare Al-Khalid's qualities with Russian T-90 and German Leopard tanks which are considered to be the best internationally.[38] The crew capacity of Al-Khalid is of three and is fitted with thermal night vision devices. Its combat range is about 400 km and maximum speed is 70 km/hr. Pakistan and China reached an agreement in 1990 to jointly design and manufacture the tank. China helped in upgrading Al-Khalid as a result of several years' research. Early prototypes were manufactured in China but after completion of Pakistan's manufacturing plant in Taxila in 1992, Pakistan started producing domestically. Al-Khalid was later upgraded taking into account Pakistan's high temperatures and terrain. Pakistan-China jointly spent millions of dollars on the indigenous production of Al-Khalid tanks. Pakistan only had 20 Al-Khalid tanks in 2002. According to one source, Pakistan has planned to make some 600 tanks by the time production ends.[39] According to another one, an estimated 600 vehicles are already in service.[40] Knowing the efficiency of Al-Khalid tank, Malaysian and UAE delegations to the International Exhibition of Armaments 2002 expressed great interest in their purchase. Bangladesh and Saudi Arabia also showed great interest in Al-Khalid tanks.[41] Syed Muhammad Ali, the first certified military tank designer of Pakistan told the press that Pakistan's Al-Khalid tank was considered among most competent main battle tanks in the world. Pakistan has also successfully manufactured Al-Khalid II with the collaboration of Ukraine and China. The upgraded tank has received a new transmission and revised electronic turret control. It is stated that Al-Khalid can be an equalizer to India's main battle tanks Arjun and T-90.

Joint production of JF-17 Thunder fighter jets

To upgrade Pakistan Air Force, Pakistan requested the US to provide it with F-16 fighter jets in the 1980s. At the time the United States suspected Pakistan of developing nuclear weapons and was hesitant to sell F-16s. Despite reservations about Pakistan's nuclear programme, however, the US government initially agreed to sell 111 F-16 aircraft to Pakistan. This decision was made due to Pakistan's proactive role in combating Soviet troops in Afghanistan. Pakistan

was expecting the delivery of the fleet, but the US government's decision to deliver F-16s to Pakistan resulted in strong opposition from the US Congress. 'Pressler Amendment' was passed in 1985 to stop all kinds of military and economic assistance to Pakistan. The aid did not stop in 1985, however, as the US president kept certifying to the Congress on Pakistan's nuclear programme. The 'Pressler Amendment' became functional in October 1990 though; consequently all types of military deals with Pakistan were terminated and Pakistan could not acquire F-16 from the United States. This was a serious blow to Pakistan Air Force. After Pressler Amendment, Clinton Administration got the 'Brown Amendment' passed by the US Congress in 1996 to ease some pressures on Pakistan caused by brutal sanctions under the former. According to Brown Amendment, Pakistan was allowed delivery of limited military assistance for the purposes of counter-terrorism, peacekeeping, and anti-narcotics operations. Additionally, President Clinton agreed to repay Pakistan's US$463.7 million which were paid for the F-16s.[42]

Being a close ally and signatory of Southeast Asia Treaty Organization (SEATO) and Central Treaty Organization (CENTO) pacts, Pakistan attached high expectations to its relations with the United States which were shattered later on. The United States only gave military aid which was for countering Soviet threat during Cold War, fighting terrorism, peacekeeping, and narcotic control. The US never gave military aid to strengthen Pakistan's defence against Indian aggression. Once again, China stepped up to bolster Pakistan's defence and initiated production of fighter jets JF-17 Thunder. Pakistan and China started manufacturing JF-17 Thunder which was seen as a substitute for expensive and hard to get F-16 fighter jets.

The first JF-17 Thunder was successfully manufactured in May 2003. Its first flight was made just three months later in August 2003. JF-17 Thunder was handed over to Pakistan Air Force as a 'Big Present' for Pakistan Day on 23 March 2007. The aircraft was inducted in Pakistan Air Force by replacing the aircraft of No. 26 Squadron.[43] JF-17 Thunder is a multi-fighter aircraft which can be operationalized in all weathers and day or night time. It's the outcome of successful joint venture between 'Pakistan Aeronautical Complex' Kamra and 'Chengdu Aircraft Industry Corporation' of China. It is not less than F-16 in any capacity and has excellent precision in air-to-air and air-to-surface combat capabilities. It has been integrated with latest technology to match with F-16 fighter jets. JF-17 Thunder features state-of-the art avionics, optimally integrated sub-systems, computerized flight controls, and capability to employ modern weapons. This provides it superiority over other jets of the same category. The aircraft can be called an asset for any air force due to its effective firepower, agility, and survivability. Pakistan Aeronautical Complex enjoys the exclusive rights of 58 per cent of JF-17 airframe co-production work. Infrastructure development is underway at a rapid pace at the complex. Potential customers for such an excellent fighter jet are desirous of buying the aircraft which is much cheaper than F-16. Among notable potential customers are Bangladesh, Islamic Republic of Iran, the Kingdom of Saudi Arabia, Myanmar, Oman, South Africa, Sri Lanka, Syria, and the UAE.[44] China has enabled

Pakistan to the level that now it can produce fighter jets and even export them to earn foreign exchange. China had been vying to make Pakistan independent in its defensive capability. Like Russia and America did with India, China gave Pakistan military aid, and also enabled it to produce weapons at home rather than purchasing them from other major powers. Its glaring example is China's laudable help in production of Al-Khalid tanks and JF-17 Thunder fighter jets. Pakistan military, despite advance payment of US$463.7 million, could not get F-16 fighter jets from the US and faced long economic and military sanctions. This discriminating approach of the United States towards Pakistan strengthened Sino-Pakistan military partnership and advancement in production of arms indigenously.

Chinese help in missile technology

Pakistan achieved nuclear parity with India in May 1998 and then started an arms race to develop nuclear-capable missiles. If a country possesses nuclear weapons, it is a deterrent against other nuclear and non-nuclear adversaries, but if it does not have effective delivery systems to launch the nuclear weapon, the deterrence is not considered credible. India and Pakistan engaged in an arms race of nuclear-capable missiles after 1998. India had already acquired sufficient technology from Russia, Israel, and the US to develop weapons indigenously. India took considerable military and technical assistance from the United States, Russia, and other European countries which gave it superiority in developing and deploying nuclear-capable missiles. Despite being a faithful ally in the Cold War and then the war against terrorism, Pakistan did not receive any military technology from the United States which could make Pakistan self-sufficient in defence production. The United States always supported Israel out of the way and then India. The only trustworthy ally of Pakistan turned out to be China, which made Pakistan self-sufficient against Indian threat. India developed multiple missiles to bolster its defence against Pakistan and China. Considering Indian superiority in conventional weapons, and then in missile technology, Pakistan sought technical assistance from friendly countries to develop its missile technology. China transferred M-11 missiles and other missile-related components to Pakistan. Pakistan's medium range ballistic missiles (MRBMs) were developed with extensive Chinese support.[45] Following is the table of Pakistan's ballistic missile arsenal.

Table 2

Pakistan's Ballistic Missiles Arsenal[46]

System	Status	Range	Propellant
Hatf-1	Operational	80-100 km	Solid
Hatf-2 (Abdali)	Tested/Development	190 km	Solid
Hatf-3 (Ghaznavi)	Operational	300 km	Solid
Shaheen-1 (Hatf-4)	Operational	750 km	Solid
Ghauri-1 (Hatf-5)	Operational	1,300 km	Liquid
Ghauri-2 (Hatf-5a)	Tested/Development	2,300 km	Liquid
Shaheen-2 (Hatf-6)	Tested/Development	2,500 km	Solid
Ghauri-3	Development	3,000 km	Liquid

Source: http://www.armscontrol.org/factsheets/missiles (edited for this paper).

Sino-Pakistan joint effort is aimed at maintaining peace and stability in the region, which can only be ensured when there is a balance of power between India and Pakistan.

The Gwadar Port project

21st century has brought more serious challenges of security, which are not limited to traditional dimensions alone. These challenges include environmental concerns, terrorism, mass migration, epidemics and lethal diseases (HIV, Ebola etc.), and proliferation of weapons of mass destruction. These threats in security studies literature are called non-traditional security threats.[47] Conventional security is more about practicing sovereignty and maintaining territorial integrity. The threat under notion of conventional security comes mostly from external military aggression. In contrast, non-conventional security is more concerned with achieving the country's development and economic prosperity. The threat under notion of non-traditional security is mostly non-military. There is another comprehensive concept of security which is an amalgamation of both traditional and non-traditional.[48] China-Pakistan strategic partnership covers both dimensions of security. Pakistan's non-traditional security relationship follows the same pattern like traditional security. China is supporting Pakistan to achieve sustainable level of both types of security. China's huge investment in Pakistan's strategic areas gives an up-thrust to Pakistan's development and economy. Gwadar is a hub of Chinese investment in the underdeveloped Balochistan province of Pakistan. Gwadar Port is located at the mouth of the Persian Gulf and right outside the 'Strait of Hormuz', which gives it a strategic and economic advantage. It is of great significance as the key shipping routes used by the mainline vessels in the region with connections to Africa, Asia, and Europe are in close proximity. This makes the port commercially and strategically significant.[49]

This economically and strategically significant port was constructed with massive support of China. Pakistan's former ambassador to China Masood Khan highlighted the significance of Gwadar Port for China's economic and strategic interests. He stated, "When this network is fully operational from Gwadar to Khunjerab, Urumqi, Beijing and Shanghai, it will give alternative choices to China for its trade with the Middle East and Europe. This alternative route will be much shorter than the one passing through the Malacca Straits." He said that Pakistan and China had a common objective of bringing prosperity in South Asian region. He mentioned that Pakistan and China were cooperating in various sectors including energy, telecommunications, agriculture, and infrastructure.[50]

India raises objections over Chinese involvement in Gwadar Port construction and Chinese economic and strategic interests in Gwadar deep sea port. Indian analysts are worried that China is involved in Gwadar project not for economic but military purposes. Sino-Pakistan defence cooperation is perceived by India as China's maritime encirclement of India. According to a US Department of Defence report, China's involvement in Gwadar Port is part of its 'Strings of Pearl strategy'[51]. China does not see encirclement of India as a

strategic goal. China considers Gwadar Port a strategic asset for Pakistan.[52] China's extensive efforts to make use of this economic and strategic route is for exporting Chinese goods and resources to West Asia. Secondly, the port can provide an easy access to the routes of Red Sea, Arabian Sea, and the Persian Gulf. China and Pakistan are jointly developing Gwadar project and "China's activities at Gwadar Port are linked with China's construction of Qinghai-Tibet railway and expansion of Karakoram Highway."[53] Pakistan's favourable geography provides an easy route for Chinese products to Middle East. To strengthen strategic and economic linkage between China and the Middle East, Pakistan provides China with safe passage through Pakistan. Gwadar has acquired greater significance after China became the largest oil importer in the world.

China-Pakistan Economic Corridor (CPEC) which has been finalized between Pakistan and China after Chinese President Xi Jinping's visit to Pakistan in April 2015 and is likely to bring US$46 billion investment in Pakistan. It is going to be a game-changer for Pakistan's political and economic stature in the region. Indian government has disapproved of this investment in Pakistan and has termed it against Indian interests. Indian External Affairs Minister Sushma Swaraj stated that Indian Prime Minister Narendra Modi 'very strongly' raised concerns regarding China-Pakistan Economic Corridor (CPEC) during his recent visit to Beijing, and termed the project 'unacceptable'.[54]

India and Pakistan have become members of the Shanghai Cooperation Organization (SCO) in July 2015. This platform provides a diplomatic forum for both the nuclear rivals to resolve their disputes through dialogue.[55] China and Russia are permanent members of the United Nations Security Council and have great stakes in the region. They may also facilitate peace process between India and Pakistan to resolve their disputes through dialogue. But there is a need for a realization on India's part that it should stop exercising hegemony in the region, which invokes Pakistan to balance Indian might. The nuclear balance of power and the notion of credible minimum deterrence is keeping both regional powers at par. Balance of power is a stabilizing factor in the subcontinent and must be preserved.

Conclusion

India and Pakistan have a history of limited and full scale wars. They went to full-fledged wars in 1965 and 1971; had small or half wars in 1948 and 1999; and are having continuous exchanges of fire in conflict zones like Siachen, Line of Control (LoC), and the Working Boundary. Many critics attribute these wars to, inter alia, the persistent and chronic imbalance between them.

Balance of power on the nuclear front, after the 1998 nuclear tests by both the countries, arguably brought them to the negotiating table. The Lahore visit of former Indian prime minister Atal Bihari Vajpayee in 1999, the Agra *yatra* of Pakistan's former president Pervez Musharraf in 2001, and their subsequent developments can be cited as examples in this connection.

Concurrently, for many experts, despite the see-saw relations between the two countries, war no more remains an option. This has become particularly important after Pakistan carried out its nuclear tests. Resultantly, it has been argued that after the Kargil crisis of 1999 both Pakistan and India learnt that they did not want to escalate the smaller fronts into a full-fledged war because of the existing balance of power.

Hard balancing between both the countries is still the dominating trend. The use of soft power is still not the priority for both as it remains lurking as an undercurrent under the spiking tides of increased expenditures on military hardware, unabated test-firing of various types of conventional and nuclear missiles, and persistent muscular posturing along the LoC, working boundary and international border between the two countries.

Regionally speaking, China is an important stakeholder in South Asian affairs because of its recent rise in international economic, strategic, and political spheres. Any prolonged armed clash between India and Pakistan has a potential of turning nuclear and China may not be excluded because of Indo-Chinese strategic rivalry. On the other hand, China has planned huge long-term investments through China Pakistan Economic Corridor (CPEC), development projects in Afghanistan, and improved trade relations with India. The development of western and south-western Chinese regions appears to be a priority for China. New industrial zones in these regions are underway, which require their products to be exported to the outside world through South Asia, preferably the CPEC.

In the same vein, China has a lot of stakes in Afghanistan. Therefore, the former is all set to be the largest development partner in the latter, bypassing India and Pakistan. It is also contributing to peace in terms of facilitating a peace process—in collaboration with Pakistan, and the US—between Afghan Taliban and Afghan government. If peace prevails in South Asia, it would provide a conducive environment for China's rise. Maintenance of peace would actually favour India and Pakistan more than China. Traditionally, hard balancing has proved more costly for both India and Pakistan in economic as well as political terms. However, the next best option is soft balancing which would maintain the balance and would not undermine economic growth, democratic institutions, and prosperity of the region enabling both the countries to vouch for more result-oriented negotiations in the long run.

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