

JOINT VIF-JINF STUDY

**FRAMEWORK FOR INDO-JAPANESE STRATEGIC
PARTNERSHIP AND COOPERATION**

**Japan Institute for National Fundamentals
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Executive Summary

Part One: Evolving International Situation

Analysis

Even with the rise of China and other emerging powers, the comprehensive national power of the United States still far exceeds that of others. Winding up the wars in Iraq and Afghanistan, the US is beginning to refocus its world strategy toward the Asia-Pacific region. This pivot or rebalancing to Asia shows the U.S. is striving to deal with a rising China, and the potential for instability that this may lead to. Japan and India should respond favourably to this change. Should India, along with Japan and other democracies in the region, cooperate with the United States, it will be possible to establish an "Asian Concert" to enhance peace and stability in the Indo-Pacific region.

Japan and India share democratic values, have common interests to counter potential Chinese threats and hold similar views on the future of the Asia-Pacific region and of Asia more broadly. Japan and India can complement each other's national power. The potential to expand the bilateral relationship is enormous. The biggest factor which blocks the expansion on Japan-India security cooperation is Japan's "post-World War II regime" embodied by the Constitution.

Action Plans

1. Japan and India should utilize the US pivot to Asia and aim to establish an "Asian Concert." They should work with like-minded countries in the region to ensure the widest possible involvement in this effort.
2. Japan should break away from the post-World War II regime and amend the Constitution.
3. On the land frontiers, VIF and JINF are of the view that China

must make serious efforts to settle the boundary question with India. Despite decades of talks, the Chinese side is unwilling so far even to share its perception of the Line of Actual Control or agree on the principles on which a boundary agreement should be reached. Further escalating tensions by China over the Senkaku islands in the East China Sea must be stopped. These are major causes of potential friction in the Asian region, and need to be addressed urgently.

4. Chinese continuing nuclear cooperation with Pakistan is an added cause of concern. Apart from the direct weapons-related cooperation, there is also the question of the nuclear reactors Chashma 3 & 4, which must not be allowed to go forward as it is a violation of the NSG guidelines. Chinese reluctance to put strong pressure on North Korea over its missile launch and nuclear program is also regrettable. China should implement the UN Security Council resolutions for which China voted as a permanent member of the Council and should also use all its levers of influence over North Korea including stoppage of energy flow to the country.

Part Two: Security in the Asia-Pacific

Analysis

(1) Towards a Rim-land Security Concept in the Face of Chinese Assertiveness on Its Maritime Periphery and Moves in the Indo-Pacific Region

China needs economic development to maintain the Communist regime, seeks to obtain natural resources to develop its economy and reach out for resources in all directions: Russian Far East to the north, South China and East China Seas to the east, Indian

Ocean region to the south and Central Asia to the west.

China faces economic, social, and political challenges going forward. Tibet, Taiwan and Xinjiang appear to be the major areas of territorial concern to China in the near-term. Internal unrest is reflected in the report that there were some 180,000 protests including riots in the country in 2011, and this number has grown in 2012. All these, together with traditional Chinese great power ambitions, appear to be the reasons behind the military build-up, which remains opaque in terms of aims and doctrines.

In the South China Sea, obtaining greater nuclear retaliatory capability through the deployment of Jin-class SSBNs equipped with JL-2 SLBM is one of the big aims behind the build-up.

In the Indian Ocean, China is building up bases and facilities in Gwadar, Hambantota, Sittwe, and Chittagong – what has come to be known as the “string of pearls” strategy around India in order to hem it in.

(2) Terrorism and Transnational crime

There are growing threats in the region from terrorism and transnational crime including piracy. Terrorism has taken a serious toll in countries like Indonesia, Thailand, the Philippines and other countries. India has been the target of state-sponsored terrorism for decades. While the terrorist groups have linked up across the region, counter-terror cooperation at the state level is clearly inadequate. It is time to act to implement the various international agreements and UN Resolutions on these subjects and make them effective.

India and Japan can give a lead in this matter by closer cooperation among the agencies concerned, and specifically work to disrupt the financing of terrorism and transnational crime.

The “Concert” countries should also agree to deeper engagement in order to face this challenge. At present, there is not enough political understanding among the countries to implement such an approach, and there is still a tendency to see problems as being faced by individual countries rather than by them collectively.

Action Plans

1. Close cooperation among those countries that share security interests and concerns is indispensable in order to channel Chinese military activities and build-up in the direction of greater transparency and stability. In the South China Sea, a coalition of the like-minded countries including the maritime states and ASEAN countries, acting in cooperation with the US and Japan should be created. Joint patrolling of the SCS should be conducted by the US and Japanese navies and supported by the coalition partners.
2. Creation of a Maritime Automated Routing and Reporting System (MARRS) and an Ocean Policing Force (OPF) in the Indian Ocean composed of coast guards of India, Japan, the US and other maritime countries concerned should be studied.
3. Coordination among the navy, coast guard and police should be enhanced both in Japan and India.

Part Three: Industrial and Technological Cooperation

Analysis

In recent years, the economic ties between Japan and India have been growing. However, there has been little bilateral cooperation in strategic industries, such as defense, civil nuclear and cyber sectors. Japan and India still face institutional and political constraints that are impeding progress in industrial and technological cooperation. Japan and India must promote cooperation in strategic industries if we are to create a true “strategic global partnership” that the two countries aim for.

Institutional and political constraints in India and Japan that are impeding industrial and technological cooperation

1. Defense industry and technology cooperation

Exports of weapons and civilian-military dual-use technologies from Japan to other countries as well as co-development and co-production of such weapons and technologies have basically been banned under Japan's three principles on arms exports that have been maintained by the Japanese government for decades. The principles were relaxed by the government of Prime Minister Yoshihiko Noda of the Democratic Party of Japan in December 2011. The Liberal Democratic Party, which returned to power in December 2012, is eager to make additional revisions to the three principles. As Prime Minister Shinzo Abe has shown eagerness to expand the Japan-India security cooperation, he is expected to take a positive approach to the relaxation of the restriction on arms exports to India.

As far as India is concerned, there are positive moves in India, which can be coupled with recent modifications in Japan's defence cooperation policies for mutual benefit. Going forward, India will be increasingly open for co-development and co-production of defence equipment, and for the involvement of the private sector.

2. Civil Industry-to-industry cooperation

Japan had been one of the top five investors in India for long. However, other countries have surpassed Japan in terms of their investment and market share in the Indian economy. Although India continued to rank the top as promising country over long term in both FY 2012 and FY 2011 surveys conducted by the Japan Bank of International Cooperation (JBIC), Japanese investments in 2011-12 accounted for just 4% of the total FDI flows into India. As per the report submitted by the Japan Chamber of Commerce and Industry in India to the Government of India, Dividend Distribution Tax, Transfer Price Taxation, Priority Sector Lending, and Upper limit on FDI in Insurance sector have been some of the main factors acting as a constraint to greater Japanese Direct

Investment into India.

However, India has recently opened up room for FDI into its organized retail sector, which is likely to constitute 20% of the total retail market in India by 2020. This of course is a welcome policy change for Japanese retail investors. And while more policy reforms are needed to boost FDI in manufacturing sectors, it must be acknowledged that many of the industry-sectors in India, in which the Japanese industries hope to compete, are labor-intense sectors. India needs greater FDI inflow, but it also needs to ensure that job-growth and job-security levels are maintained.

3. Civil nuclear cooperation

The negotiations on Japan-India civil nuclear cooperation have been deadlocked after the Japanese side asked to include in the agreement a provision to the effect that cooperation should cease if India resumed nuclear testing. Now is the time for Japan to make a strategic calculation and to shed its anti-nuclear arms obsession. As the Abe government has pledged to promote energy cooperation with India, the negotiations on a nuclear cooperation agreement are expected to resume.

India's domestic law which makes manufacturers of nuclear power reactors as well as operators of electric utilities liable in case of an accident may deter foreign manufacturers from making their way into India. At the same time, Indian public opinion needs to be kept in mind, especially as a result of the inadequate nature of the compensation provided by the company Union Carbide for the Bhopal tragedy.

4. Cyber security cooperation

VIF and JINF share basic perception about the threat to cyber security. There is ample room for Japan and India to cooperate with each other in the field of cyber security by pooling their respective strengths. There is no constitutional

problem on the Japan side with transfer of cyber technology from Japanese private companies to India or with joint research and development between Japanese and Indian companies, although some products and technologies of dual-use might be subject to the export regulations.

With regard to the possibility of cyber security cooperation between Japanese and Indian defense authorities, a favorable environment is, perhaps, being created for discussions about specific cooperation even under the constraint imposed by the current Japanese legal system. However, if Japan's Self-Defense Forces are to engage in international cyber security cooperation in earnest, it is essential to permit the exercise of the right to collective defense through the revision of the government's interpretation of the constitution and make it possible to develop cyber offensive weapons by removing the constraints imposed by the "defense only" policy through constitutional amendment.

Even though VIF and JINF agree with the desirability to establish semiconductor chip fabrication facilities in India with Japanese cooperation, some concerns remain and need to be further discussed so as to remove any hurdles that might exist.

Action Plans

1. Japan should waive the application of the three principles on arms exports and should promote defense technology cooperation with India.
2. India should try to remove factors on Indian side which block industrial and technological cooperation between Japan and India. Japanese industry, for its part, also needs to shed its inhibitions, and take advantage of the growing Indian economy, as other countries have done. Japanese investments in the automobile industry have been successful, and other areas will

- be equally so, given the will to succeed.
3. Japan should understand and support Indian military nuclear strategy.
 4. India should discuss and explain the rationale for its domestic law which makes manufacturers of nuclear power reactor liable in case of an accident.
 5. In the cyber security field, Japan and India should promote cooperation which can be pursued under the current Japanese constitution regime. After the revision of Japanese constitution, Japan and India can cooperate on the development of electronic warfare products and cyber offensive weapons.

Part Four: Cooperation at International Organizations and over Regional Issues

Analysis

(1) Cooperation at international organizations

Japan and India have been aiming at joining the UN Security Council as permanent members. However, it is inconceivable that China, which holds a veto as a current permanent council member, will support a reform of the Security Council that will increase the influence of Japan and India.

Therefore, while trying to get permanent membership of the Security Council, Japan and India should also make efforts to use international frameworks other than the United Nations. The East Asian Summit, where Japan and India have equal rights with China, is one example of international frameworks which Japan and India should strive to develop.

On matters requiring international military cooperation, although we recognize and uphold the importance of a resolution by the UN Security Council, we should not just wait for a resolution and must form a coalition of the willing nations led by Japan, India, the United States and Australia, and act flexibly in a timely manner.

(2) Advantages of the Japan-India cooperation and challenges to be overcome

Japan and India have a strong sense of familiarity with each other. That is particularly notable in the closeness between their historical outlooks. The two countries share universal values, such as freedom, democracy, the rule of law and respect for human rights. They also share political, economic and national security interests. Therefore, it is natural that Japan and India become partners.

However, at the moment, there are some constraints on the Japan-India partnership. First, India's position as an emerging power is somewhat ambiguous. India is uncertain as to the degree of support it can count on from the West and Asian democracies in the event of tensions along its land borders with China and/or Pakistan. Japan has been unable to perform its role as a responsible nation in relation to global security issues because of the constraints it has imposed on itself.

(3) Cooperation on regional issues

Tibet is an issue of serious and urgent concern. Three aspects of this problem require the attention of the international community. The first is Human Rights: the continued self-immolations taking place in the Tibetan-inhabited parts of China, apart from the Tibet Autonomous Region, are a reflection of the despair and unhappiness within the Tibetan community. The second concerns the water diversion and plans for dams on the rivers that originate in Tibet. Many of the major river systems in Asia, such as the Brahmaputra, the Mekong, and the Indus, are in Tibet. Chinese plans will have serious implications for South and Southeast Asia, and these concerns need to be addressed. The third is the UN General Assembly Resolution of 1961 that calls for self-determination for Tibet; although the Dalai Lama has accepted that Tibet will not seek independence from China, what he has called the "cultural genocide" continues.

Another critical situation is that of the Uyghurs in Xinjiang.

The province which saw violent riots in 2009 is strongly divided by deep-rooted ethnic biases because of the heavy Han Chinese migration which the Chinese state had encouraged in order to gain control over it. The economic incentives which China promised to give to the Uyghurs after the riots, however, have not been able to remove the structural challenges that continue to cause repression of the Uyghurs and thus, generate instability in the region.

In Southern Mongolia the similar heavy Han Chinese migration has driven Mongolians into a minority position and ethnic Mongolian elements have been lost in every facet of life. During the Cultural Revolution many Mongols suffered a harsh crackdown, which a Mongolian scholar has condemned as an act of genocide. The Beijing government continues repression of movements for self-determination. In the wake of an incident in which a Mongolian activist was deliberately run over by a truck driven by a Han Chinese in May 2011, protests occurred in the region, resulting in clashes with armed police, injuries and arrests.

Action Plans

1. Japan and India should strive to develop the East Asian Summit and other international frameworks where Japan and India have equal rights and power as China.
2. India should make clear its position as a responsible power rather than as a leader of developing countries. Its western partners, in turn, should accept India's security concerns and address them.
3. Japan should make clear its position as a responsible power in the world security arena.
4. On Tibet, the direction of action to be taken flows directly from the three aspects mentioned above. There needs to be greater focus on the issues of human rights violations, water diversion and dams, and UN-related action on the UNGA Resolutions on Tibet. Japan and India should take initiative to protect such fundamental values as human rights, cultural identity, religious

beliefs not only of the Tibetans but also of the Uyghurs and Mongols.

FRAMEWORK FOR INDO-JAPANESE STRATEGIC PARTNERSHIP AND COOPERATION

PART I: EVOLVING INTERNATIONAL SITUATION

The evolving international situation poses particularly serious challenges to status quo powers like Japan and India. The stability of balance of power during the Cold War years and later of US unipolarity, is now slowly giving way to a multipolar world order. Some uncertainties remain on whether this transition from a unipolar system to a multipolar world order would be smooth. The principal cause for these uncertainties is reflected in the recent developments and policy choices made by one of the major players — China — which clearly seeks to displace the US in the Indo-Pacific region and aspires to establish its own dominance in the region. While the rise and relative decline of power is inherently destabilizing, it is all the more so when an ascendant power, like China, sets its objective to become the next hegemon and seeks to achieve it in a manner calculated to undermine the legitimate interests and concerns of other major players. The situation is further complicated by the fact that it would be under the auspices of a diffused and fractious multipolar order that the international community would have to confront a host of complex challenges and threats posed by cyber war and cyber crime, pandemics, competition for resources such as oil, rare earths, minerals, water, etc., nuclear proliferation, terrorism, and climate change.

The gap between the US and some other powers is on the decline. The diminishing US lead over a group of rising new powers is no doubt what impelled Stephen M. Walt to contend in his book “The End of the American Era” that the unipolar moment is an end. Similarly,

according to a study entitled "Global Governance 2025: At a Critical Juncture" published by the US National Intelligence Council and the EU Institute for Security Studies in September 2010, US power as percentage of global power, based on an International Futures model measuring GDP, defense spending, population and technology, will decline from 22% to 18 % from 2010 to 2025. In these circumstances, it is inevitable that the US ability to achieve its objectives on its own will diminish and it will have to join hands with others in order to achieve them. This is all the more so as the precarious economic situation of the US would impel it to exercise caution in engaging in fresh external military entanglements. In the face of the changing dynamics of the international power structure, it would not be realistic to expect the US to, on its own, rein in China's clearly overweening ambitions. At best it may attempt to do so with a clutch of other powers and at worst it could even join hands with China in attempting to impose a duopoly on the international community.

India has had to face this in 1998 following its nuclear tests when the US and China had issued a joint statement on South Asia on 27 June 1998, stating that:

"We are committed to assist where possible India and Pakistan to resolve peacefully the difficult and long-standing differences between them, including the issue of Kashmir... We reaffirm this goal and our hope that we can jointly and individually contribute to the achievement of a peaceful, prosperous, and secure South Asia. As P-5 members and as states with important relationships with the countries of the region, we recognize our responsibility to contribute actively to the maintenance of peace, stability and security in the region, and to do all we can to address the root causes of tension."

The troubling reality behind this was that China was itself in occupation of large parts of Jammu & Kashmir. It had also built up

Pakistan's nuclear weapons capability and its means of delivery. It was thus in no position to act as stabiliser in South Asia. No wonder that the Government of India delivered a harsh rebuke to both the signatories.

Unfortunately, the notion of China and the US as arbiters of South Asia's destiny was to be repeated during President Barack Obama's visit to China in 2009. It is something that India finds unacceptable. It is, therefore, important for the US to clarify its position on this issue.

However the decline of US power is not absolute but relative. It is relative because other countries are gaining power. The US is still preeminent in such fields as military, intelligence, technology and education. We have to be cautious about adopting a theory of US decline.

We also have to note that with winding up wars in Iraq and Afghanistan, the US is beginning to refocus its attention on the Indo-Pacific region. The policy of pivot to Asia proclaimed officially by President Obama in November, 2011, shows that the US is striving to deal with a rising China, and the potential for instability that this may lead to, by strengthening relations with its allies in the region, notably Japan, and friendly countries in South and Southeast Asia, including India. The change in US policy is welcome. It provides a further fillip to India and Japan to expand cooperation from a broader perspective.

For nearly three decades from 1980 to 2008 China's average annual GDP has grown at an annual average rate of 9%, its foreign exchange reserves have grown from \$11.09 billion in 1990 to over \$2 trillion in 2008, and over US\$3 trillion today. Meanwhile, its share of world trade jumped from 3% in 1999 to 10% in 2009. Although it is not certain for how long China's economy will continue to grow,

considering its faltering policies and the resultant recent slowdown, it has gathered sufficient economic power which makes it capable of taking actions that can be detrimental to the interests of other major powers. The Chinese leaders have themselves recognized that their growth model – based on heavy Government-led investment and export-led growth – has run its course. How successful they will be in implementing an alternative model will need to be carefully monitored. Similarly, in the military field China has been modernizing at a furious pace. Its defence expenditure has increased by an average of 15% from 1990 to 2005. Its defence expenditure is today the highest in Asia. Moreover, while Chinese official defence expenditure figures were pegged at \$70 billion in 2010, even the most conservative objective assessments place them at \$130 billion in 2012-13 as many defence related items do not figure therein.

China's rapidly developing military forces already have immense destructive capabilities. At 1.6 million men, the PLA is the world's largest army with 7660 main battle tanks and 17700 artillery pieces. It is backed by 60 divisions of internal security forces. Its Air Force and Navy are being rapidly modernized. By 2020, the Air Force is expected to field 2300 combat aircraft of the third and fourth generation. It has tested a fifth generation stealth fighter and already has AEW and air to air refueling capability. The Navy is undergoing even more aggressive upgrading with China's strategy having changed from coastal to far sea defence. It is building a blue-water Navy and is establishing a string of refueling facilities which could double as bases in the Seychelles, Oman, Yemen, Myanmar as well as at Gwadar in Baluchistan, Pakistan, Hambantota in Sri Lanka, and Chittagong in Bangladesh. By 2020 it could have three carrier battle groups. Towards this end there has been a regular induction of new submarines, frigates, aircraft and large support vessels to the Chinese

Navy. Apart from submarines, including nuclear-powered ones, Chinese naval analyst, Shen Zhongchang has affirmed that “subsonic radiation weapons, high energy electromagnetic wave weapons and computer virus, would be used to increase the power of weapons.” One also needs to keep in mind that China is not only a formidable nuclear weapon state with 250+ strategic nuclear warheads with scores of ICBMs, IRBMs and SLBMs but also an emerging space power having carried out anti satellite and anti ballistic missile tests and by 2020 would have a space station and around 200 nano satellites. In addition, it has invested heavily in cyber warfare capabilities.

Even more disconcerting than China’s military capabilities, is the increasingly irresponsible and strident manner in which it has, of late, been conducting itself. Its role as a proliferator vis-a-vis Pakistan and North Korea whom it has from time to time used as a cat’s paw to further its narrow national interests are too well known to need detailed recounting. This has had and will continue to have a destabilizing influence on regional and international security. According to several expert studies, Pakistan’s nuclear technology, provided by China in the first place, was transferred to North Korea and is being used to enrich uranium. Pakistan has reportedly transferred nuclear technology to other countries as well. We can say China has helped North Korea’s development of nuclear weapons through two ways: one through Pakistan in the past and one through the reluctance to put adequate pressure on North Korea at present. Similarly, China’s propping up of rigid authoritarian regimes for its own purposes in gross disregard of human rights of the local people and of international opinion is not what one would expect of a mature and responsible power. Above all, its high handed behavior in its relations with countries in its neighbourhood with whom it has

differences is worrisome as it could lead to tension and even conflict. Some instances of such behavior are enumerated below.

The most significant area of concern is China's territorial grab. It has territorial disputes with nearly all its neighbours, except those that have given in to Chinese demands. In the case of India, it is even reluctant to exchange maps of its claims. The reason can only be that it does not want to settle the disputed border, and wishes to retain the flexibility to increase its demands as the situation warrants. At the same time, it is adopting an increasingly aggressive stance on the border, with deeper intrusions with larger bodies of troops. It persists in not recognising Arunachal Pradesh as part of India, and has lately been hinting at questioning the sovereignty of India over the State of Jammu & Kashmir. In the case of Japan, the dispute concerns maritime boundaries and here again, it is clear that China is increasing its stridency. Recent incidents in the East China Sea are pointers in this direction. China has taken dangerous provocative actions by sending maritime patrol vessels and planes to the area near Senkaku islands in the East China Sea to claim territorial rights over the isles. It has issued similar "warnings" to its other maritime neighbours, Vietnam, the Philippines, and Malaysia.

Clearly, the capabilities that China is building up and its aggressive behavioural pattern is a matter of grave concern to the international community and in particular some of its neighbours, most notably Japan and India. While engagement with China is currently being pursued to encourage it to use its enormous capacities for cooperation rather than coercion, regrettably this has not been particularly successful. While shedding this approach overnight may not be feasible, one needs to put in place an alternative approach to cater to the possibility of China's increasing stridency with its increasing power.

The cornerstone of such an alternative approach must rest on the twin pillars of establishing more robust defence and economic capabilities of concerned regional powers like Japan and India and their willingness to work in concert whenever China acts against international norms or even against the interests of one or other country in an effort to isolate its adversaries. Happily, most powers in the region, with the exception of Pakistan and North Korea, would be prepared to join hands with India and Japan in building up their capabilities and working together in order to curb China's adventurism, as they too feel threatened. Even Myanmar has, from time to time, and especially of late, exhibited apprehensions about the Chinese embrace. As that country seeks to break out of its isolation, it needs to be given a cautious welcome and even conditional support in its efforts to move away from its high levels of dependence on China – as has been happening in recent months. The move towards greater democratisation in Myanmar shows significant promise. Russia, too, is well aware of the dangers it faces from China in Siberia and Central Asia and it would not oppose closer India-Japan ties directed at addressing the Chinese threat, despite its pending problems with Japan.

India-Japan cooperation should also extend to addressing non-conventional threats. For instance, China's worldwide resource grab, whether for oil, gas, minerals, etc., either through strategic interventions directly with third countries or through exploratory activities in the global commons must be jointly addressed to ensure that other players are not deprived of a level playing field in meeting their resource requirements.

Japan and India share democratic values, have common interests to counter potential Chinese threats and hold similar views on the future of the Asia-Pacific Region and of Asia more broadly. Japan and India

can complement each other's national power. The potential to expand the bilateral relationship is enormous. The biggest factor which blocks the expansion on Japan-India security cooperation is Japan's "post-World War II regime" embodied by the Constitution.

Finally, it is important to remember that China has undergone a leadership transition. It is, therefore, more important now for the Asian countries and their Western partners to work together to demonstrate clearly to the new leadership that the aggressive behaviour of recent years has been counter-productive. If an "Asian concert", with appropriate Western support, were to make clear that Chinese aggressiveness would be met with firmness, then that will influence the internal dynamic of the Chinese political system.

PART II: SECURITY IN THE ASIA-PACIFIC

(1) Towards a Rimland Security Concept in the Face of Chinese Assertiveness on Its Maritime Periphery and Moves in the Indo-Pacific Region

The economic importance of the Indo-Pacific region today derives from the fact that it is and will be the most dynamic growth area in the coming years. According to most economic forecasts, Asia, except for Japan, will enjoy continued momentum in its GDP growth with the emerging economies of China and India putting up a particularly impressive show, though there is some slowdown in both these economies too. The 21st century is rightly described as the Asian Century marked by a shift of economic power to Asia spurred by sustained growth of the major regional economies. In another fifteen years, three of the four largest global economies will be Asian – China, Japan and India with ASEAN not far behind.

However, despite the phenomenal growth and increase in trade and development, Asia is far from emerging as a single political or economic entity or as an organized group like the EU. Though geographically contiguous, political Asia is divided and the process of rapid, but uneven, economic development could divide it further. The trends indicate that Asia will be home to intrinsic rivalry and perhaps even the emergence of a new cold war between China and its allies and partners on the one hand, and those countries worried about China's rise, led by the US, coming together to constrain China's aggressive behaviour and attempts at coercive diplomacy, on the other.

The above perspective should, however, in no way undermine the tremendous significance of rising Asia in general and the Indo-Pacific region in particular. The strategic significance of the region is underscored by the fact that it is home to almost half the world's population, accounts for more than a quarter of the global GDP, approximately 30% of world exports and a third of cross border capital flows. The region includes the world's second, third, tenth and fifteenth largest economies, in China, Japan, India and South Korea respectively. They among them also hold some of the world's largest foreign exchange reserves and there is thus an increasing realization of their emergent economic clout signified by the growing credence of institutions like the G20 and with the BRICS countries staking claims for the governorship of the IMF over European or the World Bank over US claims.

Despite the significant economic growth there are deep structural transformations taking place in the Asia-Pacific region. The regional dynamics operate in what can be seen as four subsystems which can be classified as the East Asia subsystem, the ASEAN-plus subsystem, the South Asia subsystem, and encompassing all three, the larger Asia-Pacific subsystem. The South Asia subsystem though geographically segregated is increasingly getting integrated owing to the rapid inter-linkages, common security dynamics and the security of sea lines of communication. In the last few years, however, "Indo-Pacific" has come to describe a set of interrelated maritime security challenges from the East China Sea to the Arabian Sea -- particularly as the Indian Navy and oil exploration efforts make forays into the South China Sea and China seeks to protect its supply routes through the Indian Ocean. It is in this construct that we will examine the main concerns of the users of the waters and the sea lanes. India's maritime priority will always rest in the Indian Ocean, but its

ships will increasingly need to move freely outside the Indian Ocean to maintain India's access to resources and markets. As such, India will benefit from a stable and uniform order that extends well beyond the Straits of Malacca. Similarly the security of SLOC in the Indian Ocean as well as in the Western Pacific has vital importance for the survival and the economic development of Japan and other Western Pacific countries as energy resources from the Middle East are shipped along with the sea lanes. Therefore, an order in the Indo-Pacific with the Rim-land countries including Japan and India acting in concert, and supported by the US, may be comfortable for prospective partners.

As mentioned, a common concern of the Indo-Pacific nations namely Japan, South Korea, some ASEAN countries, India and the US (very much an Asian power today and part of the larger Asia-Pacific subsystem together with Australia) when considering maritime issues is with respect to China's unilateral claims in the region and its growing assertiveness in enforcing them, which has manifested itself rather blatantly from 2008/9 onwards. It is also inevitable that China's postures will become even more assertive as it enhances its sea power and seeks a dominating position in Asia. Our definition of 'assertiveness' in this case is with respect to Chinese official or governmental behavior and statements that might appear to threaten these countries' interests or otherwise challenge the status quo in maritime Asia along China's maritime periphery and in the Indo-Pacific region, thereby undermining the stability in the region and causing concern to them. Specifically we will examine the Chinese behavior towards some ASEAN countries (the South China Sea), Japan (the East China Sea), South Korea (the Yellow Sea), the EEZ related issues and the South Asian Region (the Indian Ocean, the Arabian Sea and the Bay of Bengal).

(A) South China Sea

Legal and diplomatic statements and submissions

(i) China has presented justification of its longstanding territorial claims in the last few years in Notes Verbales submitted to the Secretary General of the United Nations in May 2009 and 2011 and a preliminary declaration of claims to an extended continental shelf rights.

(ii) In the Note Verbale of 2009, Beijing stated that it has indisputable sovereignty over the islands of the South China Sea and the adjacent waters as well as Sea Bed and Sub Soil thereof. Chinese officials have subsequently repeated versions of this statement since.

(iii) The documents also contained the well-known map of the region that contained the nine dashed lines, first produced by the Nationalist Chinese government in 1947. This map shows nine dashed lines or hash marks that form a U-shape around all the Islands of the South China Sea including the Paracel and the Spratly Islands. Some of the dashes lie close to the coasts of Vietnam, Malaysia and the Philippines. The submission was the first time that China had presented a map to the UN in support of its claim though in a very low key fashion. Maps with these dotted lines have been produced earlier and not pursued in official documents. Also in the document submitted in 2011 claims were more specific. China for the first time stated that the Islands are entitled to EEZ and continental shelf.

(iv) The above documents are clearly alarming for many of the ASEAN countries and other users of these waters like India, Japan, US, etc. who are interested in freedom of navigation, in view of their escalating assertive nature towards maritime sovereignty claims and the language used in the Note Verbale viz. claiming indisputable sovereignty, and the submission of the map with nine-dashed lines which if accepted would imply a severe curtailment of the EEZ's claimed as per the UN Convention on the Law of the Sea [UNCLOS], by Vietnam, Malaysia and Philippines and affect even Brunei and Indonesia. Besides control of the Islands and the claimed EEZ's would not only impact the prospecting for and subsequent availability of oil, fishery and other resources but also enable China to undertake surveillance and control of areas like the Malacca Straits through which very busy international shipping lanes carrying for example almost 80% of Japan's oil and all the Indo-Pacific trade pass. This is not all - the documents also give out China's statement of intention to claim the extended continental shelf in the East China Sea and the right to submit claims in other areas.

Activities taken in support of China's claims

(i) In recent years Beijing has undertaken a variety of activities to defend its claims over territories and waters in the South China Sea. These include:

(a) The imposition and expansion of an annual fishing ban which from 2009 has included foreign vessels.

(b) Regular maritime security patrols, primarily conducted by the Fishery Administration and the State Oceanic Administration, which have involved the

detention of Vietnamese fisherman and cutting cables of survey ships. Chinese maritime patrol vessels have also on occasion shot at and rammed Vietnamese and Philippine vessels. The increased patrols have resulted in clashes with Philippine and Vietnamese ships with the increased targeting of hydrocarbon seismic exploitation vessels, clearly an evidence of a more assertive posture. This posture has been extended to China questioning Indian exploration in two blocks in the South China Sea well within the Vietnamese EEZ.

(c) Various forms of political and diplomatic pressure and planting of markers on unoccupied reefs.

(d) Conducting scientific activity and extensive naval exercises in the vicinity of areas it claims. By and large all these actions have greatly increased in number, duration and intensity over the years.

(ii) The PLA Navy [PLAN] has also conducted regular patrols of disputed waters of SCS increasing in frequency since 2005. Also in the past few years the frequency and scope of Chinese naval exercises in the areas has apparently increased and includes exercises in disputed areas. These exercises include advanced tactical exercises, live fire drills, coral reef assault operations etc. 2011 saw large task forces, advanced ships missile launches and amphibious landings. Long range naval aviation exercises to include radar jamming, night flying, and met air refuelling and simulated bombing runs in the SCS.

(iii) In general such exercises and behavior are an indication of China's signaling its resolve to defend its claims as made above and a

prime example of Beijing's greater assertiveness in recent years. Moreover the claims made seem to expand as Chinese maritime capability grows.

(B) East China Sea

(i) In recent years China's (largely military) presence in the East China Sea has clearly increased. PLAN warships have extended and exited the East China Sea through narrow seas between Japanese Islands on several occasions since 2004. These transits have been regarded with concern by the Japanese. Some of these deployments were unprecedented in the number and sophistication of the ships involved. This signals an increase in China's ability to operate naval vessels in a coordinated manner over much further distances from home.

(ii) In September 2010 Beijing took a very aggressive diplomatic stance toward Tokyo in reaction to Japan's arrest of a Chinese fishing boat captain on grounds of intentionally ramming into a Japanese coast guard vessel near the Senkaku islands in the East China Sea. Further after Japan released the captain of the vessel, Beijing rather than moving to defuse the tensions demand an apology from Tokyo for detaining the captain and pay compensation. Tokyo refused to apologize of course and demanded that Beijing pay compensation for the repairs to the Japanese Coast Guard vessel.

(iii) After the Japanese government bought some of the Senkaku islands from their private owner and placed them under state control in September 2012, the Chinese government criticized Japan, fueling violent protests in China against Japan. Chinese maritime law enforcement vessels, many of them belonging to the Fishery

Administration or the State Oceanic Administration, began to hover around the Senkakus almost on a daily basis. Some of the vessels intruded into Japanese territorial waters around the islands while planes from the SOA violated Japanese airspace over them. In February 2013 the Japanese government lodged a protest with China that a Chinese Navy frigate locked its weapon-targeting radar onto a Japan Maritime Self-Defense Force destroyer in the East China Sea in January. The Japanese Defense Ministry also announced that another Chinese frigate was suspected of similarly locking weapon-targeting radar onto a MSDF helicopter earlier in January.

(iv) As in the case of the South China Sea, China's recent actions in the East China Sea, especially those around the Senkakus are considered provocative and even aggressive with Beijing asserting its strong presence in a big way. Such behavior as also in the South China Sea is reflective of the combined influence of increasing capabilities to support long-held national objectives with responses that are provocative and unprecedented. Further responses involving Tokyo are particularly influenced by strong nationalist sentiments towards Japan and the same is the case with their approach to India.

(v) China decided to merge four of five major maritime law enforcement agencies into a new Coast Guard at the National People's Congress in March 2013. The unified Chinese Coast Guard will become Asia's largest coast guard surpassing that of Japan. This is likely to encourage further adventurism by China both vis-à-vis Japan on the Senkaku Islands' issue and in the South China sea, leading to an escalation of tension in the area.

(vi) The other aspect to be noted is that PLAN's deployments clearly reflect an increasing capacity of the Chinese Navy to operate in the

blue water regions along its periphery. Many of the deployments near Japan have been part of longer voyages into the Western Pacific or southward to the South China Sea and beyond. Thus Beijing's desire to employ its growing military capabilities to support its territorial claims in disputed waters, defend its interpretation of its EEZ, and more generally strengthen its presence in the Western Pacific and southwards, is not in doubt and its actions are a sign of increasing capability to promote its interests in vital regions. India has to note this growing Chinese capability, its preparations in the Indian Ocean theatre at this time and its generally assertive behavior in support its claims and interests.

(C) Exclusive Economic Zone Challenging US Presence.

(i) In addition to claims discussed regarding maritime territories, the Chinese government has in recent years presented an interpretation of UNCLOS definition of the rights of coastal states with regard to their EEZ that appear to many observers both unconventional and assertive. Without going into details of Chinese assertions, the US and many others do not accept Beijing's interpretations stating that though coastal states are granted jurisdiction over environmental and economic resources related to activities within the EEZ, nothing in UNCLOS or state practice restricts military activities by other countries undertaken with due regard.

(ii) Since 2000, Chinese naval vessels and aircraft have repeatedly confronted US military surveillance ships and aircraft operating in the waters and airspace of the Chinese EEZ resulting in at least one collision incident (the EP3 Aircraft incident of 2001) and several near collisions or close harassment (including of the USNS Impeccable and USNS Victorious incident of March and May 2009) and in each case

generating a serious political crisis. The ARIHANT incident, involving an Indian ship, off Haiphong (2010) also falls within this category though here the source questioning was deniable by the Chinese. The incident was well within the Vietnamese EEZ though within the claim lines of the Chinese discussed above.

(D) The Yellow Sea

Without going into details, the standoffs between the US/South Korea and the Chinese in the Yellow Sea off the Korean Peninsula are also over assertiveness in respect of Chinese maritime sovereignty perceptions about her EEZ. Although exercises in the past in these waters drew no protests, in 2010/11, the US/ROK military exercises in the area drew strong protests post the March 26, 2010 incident of the sinking of the South Korean frigate off the western coast of the Peninsula. The very general but strong diplomatic language employed by Beijing suggests that its concerns were not solely based on the tense situation, but in general to the conduct of military exercises within Chinese-claimed EEZ. It has been suggested that the strong protests, as expressed in the statements made by serving military officers and by the media attention given to this case, were driven by the PLA.

(E) Indian Ocean Region

Sharing a common land border, the interactions between China and India have hitherto been limited to the terrestrial domain. The strategic orientations of the two have also been largely continental. But as ascendant major powers with geographically expanding interests, they are increasingly turning their attention to the maritime realm as well, even though the land dispute continues to simmer.

Undeniably, therefore, the coming years could witness greater India-China interactions in this part of the global commons. The worst is not inconceivable - a perceived irreconcilability of interests leading to an armed conflict that spills over to the sea.

India's areas of maritime interest are stated in its maritime strategy document. While its primary area lies in the northern Indian Ocean (IO), the secondary area extends into the southern IO and the Western Pacific (WP). In case of China, these areas are not clearly articulated, but could be deduced. China's primary focus clearly lies in the WP. This was first articulated in 1985 when its maritime strategy was reoriented from "static coastal defence" to "active offshore defence." Plans were also drawn up to develop the People's Liberation Army Navy (PLAN) in accordance with the "island chains" in the WP. The broad aim was to make the PLAN capable of operations up to the first island chain by 2000, and up to the second island chain by 2020. More recently however, Chinese writings have begun to reflect Beijing's enhanced emphasis on the IO as well. In 2003, for example, in their article published in *Guafang Bao*, Jiang Hong and Wei Yuejiang depict the first island chain, normally thought of as stretching from Japan to Sumatra, as extending further southwards all the way to Diego Garcia. China's strategic interest in the IO is empirically corroborated by the PLAN's anti-piracy mission in the Gulf of Aden since December 2008 (China's first ever naval mission beyond the WP); and the deployment of its hospital ship *Daishandao* to the Indian Ocean Region (IOR) in 2010 (medical mission). Importantly, however, China's strategic intent for establishing a "geopolitical" presence in the IO is not of recent origin. In his book written in 2005, the late Dr K. Subrahmanyam recalls that as far back as in 1994, China had plans to deploy its navy in the Indian Ocean "in the early years of the 21st century". If so, piracy off

Somalia provided the opportunity that the Chinese may have been looking for. It may thus be inferred that the IO is China's secondary area of maritime interest. Therefore, the zones of maritime interest of China and India broadly overlap albeit with differences of strategic emphasis, and this emphasis itself could veer towards the IO in the future as China with numerous possibilities of discord with Indian interests or in pursuing its own develops capabilities both in terms of power projection platforms and infrastructure to support them in accordance with its "Forward to the Indian Ocean Policy." It is with this perspective that we examine the Chinese building of the Strategic Land Bridges and the so called String of Pearls.

Strategic Land Bridge: China's dependence on the IO for its energy transit represents a major strategic vulnerability. Symptomatic of this anxiety is the term "Malacca Dilemma" used to describe former President Hu Jintao's anxiety in his statement of November 2003, "some big powers have tried to control and meddle in the Strait of Malacca shipping lanes . . . [We need] a new strategy . . . to ensure energy security." This would be achieved through overland energy pipelines to bypass the Southeast Asian chokepoints. These projects include Sittwe (Myanmar), Gwadar (Pakistan), Chittagong (Bangladesh) and Kra (Thailand). At present, the Sittwe-Ruili pipeline and its associated oil port at Kyaukpyu under construction are most relevant. The pipeline will transport not only the Middle-East and African crude, but also natural gas from Myanmar offshore. When these fructify by 2013, the Chinese tanker traffic near India's Andaman and Nicobar Islands would grow substantially. This would facilitate Chinese intelligence collection against India. China may also push Myanmar to grant it naval access to protect its energy infrastructure and shipping assets, with more severe implications for India. However, pipelines are unlikely to

reduce China's strategic vulnerability substantially since these will be overwhelmed by the growth in its oil demand and a large percentage of its oil transported through the traditional SLOCs. Besides, these can only bypass the Southeast Asian straits, not the rest of the IO. This has led Chinese analysts to suggest diverse plans. One is to expand the "strategic defensive perimeter" of its South Sea Fleet for "high-seas defence operations." Another is to develop a dedicated flotilla for the IO. Either way this will lead to enhanced distant presence of the Chinese Navy in the IOR where the Indian Navy has primary concerns which the Chinese are unlikely to be sensitive to. This leads us to the so called String of Pearls which the Chinese are establishing.

String of Pearls: The buildup of a string of strategic relationships along the sea lanes from the Middle East through the Indian Ocean to the South China Sea has been termed "the string of pearls" with Hainan Island in SCS the first pearl in the string. The string further rises to cover the Chinese sea lines of communication through which China, being the second largest consumer and the third largest importer of oil in the world, imports the bulk of its oil. It has been stated above that even after the establishment of the pipelines the need to secure the SLOCs in the Indian Ocean will remain so that we can expect distant presence of the Chinese Navy in the IOR. The development of base and other facilities in Pakistan, Sri Lanka, Myanmar and Bangladesh also indicates that the Chinese involvement is for more than purely economic reasons.

CONCLUSION –Shaping a Rimland Security Strategy

China faces economic, social, and political challenges going forward. Dissatisfaction among the people grows as the economic gap

between the rich and the poor widens and corruption among senior government and party officials become pervasive. Kyodo News reported there were some 180,000 protests including riots in China in 2011. China desperately needs continued economic development to alleviate the sense of frustration and to sustain the one-party Communist regime. In order to keep its economy developing China needs energy and natural resources. That is why China reaches out for resources in all four directions: Russian Far East to the north, the South China and East China Seas to the east, the Indian Ocean region to the south and Central Asia to the west.

Exploiting offshore energy and natural resources in the seas around China and securing the sea lanes for the transportation of these resources from the Middle East and Africa appear to be among the major reasons behind China's naval buildup in the South China and East China Seas and the Indian Ocean.

Another reason behind China's strong desire to control most parts of the South China and East China Seas should be to support its territorial claims to disputed islands and to keep the US naval forces from approaching Taiwan in the case of a crisis over Taiwan. The control of the South China and East China Seas will also allow China freely to deploy its naval ships and submarines to the Western Pacific and beyond through narrow waters between islands of Japan and other countries.

Moreover the South China Sea is suitable for the deployment of China's new Jin-class nuclear-powered ballistic missile submarines (SSBNs) which can descend to a depth of 3,000-4,000 meters. If China deploys Jin-class SSBNs equipped with nuclear-armed JL-2 SLBMs, the range of which can be extended in the future to reach the

US mainland, then China will obtain greater nuclear retaliatory capability against the US, reducing the superiority of US nuclear deterrence. Some naval experts believe China aims at making the South China Sea a sanctuary for the Chinese navy to obtain the capability to launch sea-based missiles capable of hitting the US mainland.

China's core-interests bear a strong 'territorial' character, which is explicitly visible in its national objective of "territorial consolidation." China has lately been more emphatic in asserting its maritime territorial claims in the South China and East China Seas using both political and military means as discussed above. Thus Chinese "peace and harmony" rhetoric and strategic actions could be diametrically opposite and take a predictable pattern of proclamations of Chinese "core interests" and "non-negotiable rights" as military capability builds up, with nationalistic demands for strong action. This cannot but be of concern to countries of the Indo-Pacific region.

As its assertive stance becomes more forceful, in tandem with the growth of its naval power, it could even lead to an armed conflict in the WP involving the United States. This would affect both India and Japan, which have strategic and economic interests at stake in the region.

China is in the advanced stage of development of anti-ship ballistic missiles and has in place other wherewithal for an Anti-Access/Area Denial strategy to keep the US carriers and other surface forces away from projecting power to her maritime periphery, especially the Taiwan Strait. The US to deal with this A2/AD strategy is developing counter strategies in terms of the Air-Sea Battle Concept. It may be

mentioned that the anti-ship ballistic missile system would cover not only the Western Pacific but also large parts of the Bay Of Bengal and the North Arabian Sea impinging seriously especially on Indian Navy carrier operations in these areas.

Thus Japan, Korea and some of the ASEAN states despite their deep economic interlinkages have serious sovereignty and resource issues with China. India is similarly concerned over its territorial and maritime issues with China. The US has an interest in the freedom of navigation in the entire area and treaty obligations with Japan, South Korea, Thailand, the Philippines and Australia as well as security commitment to Taiwan. The Obama administration's new policy of pivot or rebalancing to Asia clearly reflects US interests and commitments in the Asia-Pacific region.

In the coming years, thus while the United States may continue to uphold its security commitments in the WP, its economic constraints and reduced strategic imperatives in Afghanistan and Iraq may lead to a reduced naval presence in the IO. This would embolden China further to coerce the 'pearls' to meet its operational needs in the IOR.

China claims Indian territory and has also developed close economic and security relationships on the Indian periphery, responding with alacrity to the China card that these nations play. Further, China has practically an alliance relationship with Pakistan and a deep security relationship with Myanmar on India's Western and Eastern flanks, though this latter may be changing somewhat. In the IOR it has developed the string of pearls and these are being set up rapidly and should be viewed as part of China's extended preparation for warfare to safeguard its national security (in its own perception) and it is only a matter of time when China's core interests and non-negotiable

sovereign rights would extend to the Indian Ocean as capability to project power builds up and China moves to support both its continental and maritime claims in the Indian Ocean Region. The facade of trade-oriented commercial ports could be replaced by indignant announcements of China's "core interests" requiring conversion to naval bases at least at one or two locations.

If we see the map of the Indo-Pacific area we note that China is at the centre of the Asian Heartland, and with its allies like Pakistan and North Korea and what we may call target countries like Nepal and Myanmar, it attempts to occupy the complete Asian continental space and then expand to the ocean. The opposition to this strategy comes from countries who we may say are on the Rim, plus some of the other democratic countries. To counter China's strategic moves, it is important to adopt a Rim-land security approach wherein India, Japan, South Korea and the littoral countries of Southeast Asia develop strategic partnerships, supported by the US. India's "Look East Policy" should provide for this strategic orientation too, as it is important for India to become a player of consequence in the littoral Indo-Pacific too. India will probably need its own version of A2/AD strategy vis-à-vis the Chinese for which technological and material support from other Rim-land and democratic countries in relevant areas of maritime warfare would be of great value.

(2) Terrorism and Transnational Crime

There are growing threats in the Indo-Pacific region from terrorism and transnational crime including piracy. Terrorism has taken a serious toll in countries like Indonesia, Thailand, the Philippines and other countries. India has been the target of state-sponsored

terrorism for decades. While the terrorist groups have linked up across the region, counter-terror cooperation at the state level is clearly inadequate. It is time to act to implement the various international agreements and UN resolutions on these subjects and make them effective.

India and Japan can give a lead in this matter by closer cooperation among the agencies concerned, and specifically work to disrupt the financing of terrorism and transnational crime.

The “Concert” countries should also agree to deeper engagement in order to face this challenge. At present, there is not enough political understanding among the countries to implement such an approach, and there is still a tendency to see problems as being faced by individual countries rather than by them collectively.

We propose to study a “Safe Ocean and Save Ocean Initiative.” Under this initiative a model governance system for regulating the global oceanic commons would be developed to manage safety of maritime traffic and prevent degradation of ocean eco-system through wanton acts of destruction of the environment. **The initiative is elaborated in Appendix – I.**

PART III: INDUSTRIAL AND TECHNOLOGICAL COOPERATION

In recent years, the economic ties between Japan and India have been growing. According to statistics compiled by the Indian Ministry of Commerce and Industry, the total value of Japan-India trade stood at US\$18.4 billion in fiscal 2011 (from April 2011 to March 2012), marking the second straight year of year-on-year growth in excess of 30%.

However, Japan-India trade was far smaller than Japan-China trade or India-China trade. China is one of the largest trading partners for both Japan and India. For India, Japan is the 11th largest trading partner (fiscal 2011), while India is not even among Japan's top 20 trading partners.

In August 2011, the Japan-India Comprehensive Economic Partnership Agreement (CEPA) went into effect, laying the foundation for further development of the two countries' overall economic relations. However, there have so far been few actual cases of bilateral cooperation in strategic industries that concern the backbone of national and economic security, such as defense, civil nuclear and cyber sectors.

Japan and India still face institutional and political constraints that are impeding progress in industrial and technological cooperation. If those constraints are removed, leading to a further growth of trade and investment ties and industrial cooperation between Asia's two major democracies - Japan and India, it will be possible to counterbalance the growing influence of China, which has been rising under a one-party autocracy led by the Communist Party. In

particular, promoting Japan-India cooperation in strategic industries will be a challenge that we must meet if the two countries are to create, not only in name but also in substance, “a strategic global partnership” that we aim for.

In Part III, we analyze institutional and political constraints in Japan and India that are impeding progress in industrial and technological cooperation between the two countries.

Institutional and Political Constraints in India and Japan

(A) Constraints on Defense Industry and Technology Cooperation

Exports of weapons and civilian-military dual-use technologies from Japan to India as well as co-development and co-production of such weapons and technologies have been banned under Japan’s three principles on arms exports that have been maintained by the Japanese government for decades.

The three principles on arms exports, which were announced in 1967 by then Prime Minister Eisaku Sato of the Liberal Democratic Party (LDP) in a question-and-answer session in the Diet (Japan’s parliament), were originally intended to ban arms exports to (i) communist countries, (ii) countries to which arms exports are banned under UN resolutions and (iii) countries which are or may be involved in an international military conflict.

However, in 1976, then Prime Minister Takeo Miki, also of the LDP, expanded the scope of the export ban by announcing a government opinion that the ban should also apply to countries other than those

described in the original principles, and to facilities related to arms production. In addition, the minister of international trade and industry stated in a question-and-answer session in the Diet in the same year that the export ban should apply to arms-related technologies as well. Consequently, exports of arms and related facilities, equipment and technologies have almost totally been banned.

But the three principles and the extended application of them are not legally binding. Therefore, exemption from the export ban was sometimes granted on a case-by-case basis, starting with the decision in 1983 to exempt the provision of military technologies to the United States. Other cases of exemption included the Japan-US co-development and co-production of a missile defense system and export to Indonesia of patrol boats intended for crackdown on acts of terrorism and piracy.

However, as the view grew that such case-by-case exemption is insufficient, the government of then Prime Minister Yoshihiko Noda of the Democratic Party of Japan (DPJ) relaxed the three principles in a comprehensive manner on December 27, 2011. The key points of the new standard for arms export was as follows:

- (i) Export of defense equipment related to peacemaking and international cooperation may be permitted. The export must be premised on strict management of exported equipment by the importing country to prevent its use for purposes other than the intended ones and its re-export to a third-party country without prior consent from Japan.

(ii) International co-development and co-production of defense equipment may be permitted if the partner country has cooperative relationship with Japan over national security and if such co-development and co-production is likely to contribute to Japan's national security. The co-development and co-production must be premised on strict management, i.e., prior consent from Japan should be required as a condition for the use of developed and produced equipment for purposes other than the intended ones and for export to a third-party country.

(iii) Exports other than those specified in (i) and (ii) should be dealt with carefully based on the three principles on arms export.

Following the revision of the standard for arms export, the Japanese government has been considering measures to strengthen support for enhancement of coast guard capability, including the provision of patrol boats, through official development assistance (ODA) or other means. Japan has already received a request for such support from the Philippines. Moreover, Japan has agreed with the United Kingdom on co-development and co-production of defense equipment and the two countries are also in last-stage negotiations about specific cooperation programs. The United States, France and Italy have also indicated interest in co-development and co-production with Japan. Australia has requested Japan to provide an engine technology adopted in submarines operated by the Maritime Self-Defense Force.

Since before the revision of the three principles on arms exports, India has shown interest in importing the US-2 amphibian aircraft. US-2 can be used for multiple purposes, including not only search and rescue activities but also maritime surveillance and transport of goods and personnel, so it will be highly useful for the Indian Navy.

Although the Japanese government sees no problem with exporting US-2 because this aircraft is outside the scope of defense equipment to which the three principles on arms exports are applicable, an agreement has not been reached on the price.

The LDP, which returned to power as a result of the general election held in December 2012, is eager to make additional revisions to the three principles on arms exports. In March 2013, the LDP-led coalition government of Prime Minister Shinzo Abe announced that exemption from the principles will be granted to the export of Japanese-made parts for the F-35 stealth fighter, which has been adopted as the next main fighter of the Air Self-Defense Force. As Prime Minister Abe has shown eagerness to expand the Japan-India security cooperation, he is expected to take a positive approach to the relaxation of the restriction on arms exports to India.

Japan is a member of international regimes that control the export of dual-use products and technologies that can be adapted to the development and production of weapons of mass destruction as well as conventional weapons, so it maintains control over such products and technologies through a security trade control system established on the basis of a relevant domestic law (Foreign Exchange and Foreign Trade Act). This system requires prior permission from the minister of economy, trade and industry when there is the risk that dual-use products and technologies being exported may be used for the development or production of weapons. India is not on the list of countries regarding which such prior permission is unnecessary. That is because India has not acceded to the Nuclear Non-Proliferation Treaty (NPT) or joined various international arms export control regimes. As will be explained in section (C), we believe that the

export restriction due to India's non-accession to the NPT is unreasonable and should be abolished.

In India, there are few constraints on the trade in military equipment. There are to be no political or other conditions or restraints on the use of weapons purchased by India. Thus, there are some hurdles in the matter of End Use Monitoring with some countries, and this has been partly responsible for the refusal by India to buy certain types of weapons where such conditions would be operationally inadvisable.

Similarly, India requires that all sellers be willing to transfer technology and meet the offset requirements. The former is straightforward, and requires that suppliers of military equipment should agree to the licensed production in India of the equipment sold. This happens over time, and the initial purchase of fully-made up weapons. But, over time, Indian production units must be able to manufacture the items indigenously.

Offsets were introduced relatively recently, and require that sellers of major amounts of equipment are obligated to source between 30 and 50 percent of the total value of the contract from India. A list of sectors where such sourcing may take place is available from the Indian Ministry of Defence, and allows a fair degree of freedom to suppliers to choose from. Furthermore, the Government of India is open to suggestions for policy review where the supplier faces difficulties. An example is the recent decision to allow the civil aviation sector to be covered under the offset scheme.

India is also keen to develop other forms of cooperation, and co-production is one of the priority directions for the Government. India has a strong scientific and industrial base, and is a stable

market for military hardware. Indeed, in 2012, it was the largest importer of military equipment. Thus, co-development and co-production are attractive propositions because both partners gain from the market depth and technical skills available in India.

Another emerging trend is the entry of the private sector in the Indian defence sector. While some private companies have had long established ties with the industry, new companies are emerging, though the progress has so far been slow. Government and industry are in regular contact on this issue and early progress in this direction may be expected.

(B) Constraints on Civil Industry-to-Industry Cooperation

Japan had been one of the top five investors in India for long. However, other countries have surpassed Japan in terms of their investment and market share in the Indian economy. Even though trade between India and Japan of \$13.72 billion in 2010-11 rose to \$18.43 billion in the FY 2011-12, recording a remarkable 34.33% increase, the figure still remains way below China-Japan trade (\$297.19 billion in 2010-11) or even trade between India and China (\$63 billion in 2010-11).

The value of Japanese direct investments in India varies widely depending on the statistics used, but the number of Japanese companies operating in India has steadily been increasing, standing at 550 in 2008, 627 in 2009, 725 in 2010, 812 in 2011 and 926 in 2012 (according to statistics compiled by the Japanese embassy in India). Thus, there is no doubt that Japanese investments in India are increasing. India continued to rank the top as promising country over long term in both FY 2012 and FY 2011 surveys conducted by the

Japan Bank of International Cooperation (JBIC). India was also ranked a top as promising country for overseas operations over medium term with regard to automobile industry in the 2012 JBIC survey. India, however, ranked overall second following China as the promising countries for overseas business over medium-term. India also positioned second after China as promising country for overseas operations with regard to major industries including chemicals, general machinery, electrical equipment & electronics.

Yet, Japanese investments in 2011-12 accounted for just 4% of the total FDI flows into India, a level which reflects neither the potential of Japan to invest nor the capacity of India to absorb. According to JETRO, during January-March 2011, India received \$289 million worth of Japanese FDI, which was a 36.3% decline over the same period of the previous year.

As per the report submitted by the Japan Chamber of Commerce and Industry in India to the Government of India, following have been some of the major constraints which have curtailed the growth of Japanese Direct Investment into India:

(i) Dividend Distribution Tax: Under the current system, an income is taxed twice: first as dividend distribution tax, and second as foreign sourced dividend in the country of residence of the foreign shareholder. In effect, it contributes to the impediments to higher FDI from Japan into India.

(ii) Transfer Price Taxation: Commercial transactions between the different parts of the same multinational group may not be subject to the same market forces which shapes the relations between the two independent firms. One party transfers goods or services to another party of the same organization, for a price. That price is known

as “transfer price”. However, since the price is not defined by the forces of market, in order to avoid any inconsistent practices of a foreign organization, TP is made taxable. While the motive is to avoid any corrupt practices, however, the current system India does not have clear criteria for the measurement of TP taxation, and as a result, it acts as an impediment to FDI flows into India.

(iii) Priority Sector Lending: The recent revision in regulations related to Priority Sector Lending (PSL) restricts foreign banks to invest in Small-Medium Enterprise (SME) sector, causing them to take extra cautions in lending on-shore loans. As a result, it diminishes not only their intentions to expand the on-shore business but also the business activities of corporate which require on-shore funding.

(iv) Upper limit on FDI in Insurance sector: Foreign insurance companies currently can only have a share of 26%. This restricts the companies from introducing international risk management methods, such as loss control measures.

These factors, among others, act as policy restraint, impeding industry to industry cooperation between India and Japan. However, India recently opened up room for FDI into the organized retail sector. Organized retail, which currently constitutes 8% of the total retail market, is likely to jump up to 20% by 2020, according to a report published by Deloitte. This of course is a welcome policy change for Japanese retail investors. But, much has to be done in opening up the manufacturing sectors of the economy to Foreign Direct Investment.

At the same time, there are certain domestic factors which contribute to the formulation of these constraints and must be acknowledged. Many of the industry-sectors of India, in which the Japanese

industries hope to compete with other foreign organizations, are labor-intense sectors. And, while India needs greater FDI inflow, it also needs to ensure that job-growth and job-security levels are maintained.

(C) Civil Nuclear Cooperation

India has promoted the development of nuclear weapons on its own, without acceding to the NPT. As it conducted a nuclear test twice, in 1974 and 1998, India was internationally isolated and was unable to receive support related to nuclear power generation from other countries except for the Soviet Union/Russia. However, under the administration of President George W. Bush, the United States agreed with India in July 2005 to make efforts toward cooperating on civilian nuclear power without requiring India to accede to the NPT. At a general meeting in September 2008 of the Nuclear Suppliers Group (NSG), which controls the export of nuclear-related products and technologies to non-NPT member countries, a proposal to exempt India from the export restriction was approved unanimously, including by Japan.

France, Russia, Canada and South Korea, in addition to the United States, signed a nuclear cooperation agreement with India following the NSG's decision to grant exemption to India, and Japan entered negotiations over such an agreement in June 2010.

The negotiations started under the government of then Prime Minister Naoto Kan of the DPJ on the Japan side but became deadlocked after Foreign Minister Katsuya Okada stated in August 2010 that Japan wanted to include in the agreement a provision to the effect that cooperation should cease if India resumed nuclear

testing. Moreover, as the Great East Japan Earthquake triggered the Fukushima nuclear accident in March 2011, the negotiations were virtually suspended. The Kan government shifted to the policy of abandoning nuclear power but Prime Minister Yoshihiko Noda, who succeeded Kan, visited India in December 2011 and agreed with Indian Prime Minister Manmohan Singh on the importance of resuming and concluding the negotiations at an early date. As the LDP-led Abe government, which was inaugurated in December 2012, has reversed the DPJ's policy of eventually abolishing nuclear power generation and has pledged to promote energy cooperation with India, the negotiations on a nuclear cooperation agreement are expected to resume and make progress.

The fundamental factor that could stymie the Japan-India negotiations on a nuclear cooperation agreement is the difference between two countries' approaches to nuclear arms. Japan chose the path of relying on the nuclear deterrence provided by the United States for its national security while abandoning the option of possessing nuclear weapons and acceded to the NPT. In contrast, India has maintained its position that possessing nuclear arms is essential to its national security and refused to accede to the NPT or to sign the Comprehensive Test Ban Treaty (CTBT) (however, India announced it would refrain from nuclear testing after conducting a test in 1998).

India has armed itself with nuclear weapons because China, which fought a war with India in 1962, and continues to claim large parts of Indian territory, successfully tested a nuclear bomb in 1964. India refused to sign the NPT, which went into effect in 1970. The NPT is a very discriminatory international regime for the control of nuclear arms, under which China received the privileged status of a nuclear

weapons state whereas India, which later conducted a nuclear test, will be recognized only as a non-nuclear weapons state.

Even after the 2008 general meeting of the NSG, which exempted India from export restriction of nuclear-related products and technologies to non-NPT member countries, the Japanese Foreign Ministry has been insisting that there has been no change in Japan's policy of urging India to accede to the NPT as a non-nuclear weapons state and to sign and ratify the CTBT at an early date. However, it is unreasonable of Japan, which is protected by the U.S. nuclear umbrella, to demand that India, which is trying to ensure national security through its own nuclear deterrence, should accede to the NPT, forsake nuclear weapons and abandon nuclear tests. This argument is strengthened by the fact that India did seek nuclear guarantees from the existing nuclear powers, but was declined. This left India no option but to develop its own deterrent capability.

In fact, after Japan abandoned the option of possessing nuclear weapons, there was persistent domestic opposition to and cautiousness about the country's accession to the NPT, which discriminated against non-nuclear weapons states in favor of the five acknowledged nuclear weapons states (the United States, the Soviet Union/Russia, the United Kingdom, France and China), so the decision to accede to the NPT was a difficult one for Japan. Further, when Japan acceded in 1970, it was with the caveat that if the nuclear guarantee were withdrawn, it would be free to reconsider its adherence to the NPT. Given this background, Japan should be able to understand India's stance of insisting on staying outside the NPT.

Furthermore, US and French nuclear reactor makers cannot manufacture reactors for India without technologies and equipment

available from their Japanese partners. Japanese companies are dominant in the production of some nuclear reactor components (e.g., pressure vessels made by Japan Steel Works). Therefore, the United States and France need the participation of Japanese companies if they are to go ahead with nuclear cooperation with India, and to that end, the conclusion of a Japan-India nuclear cooperation agreement is essential.

One major reason why the United States under the Bush administration decided to cooperate with India on nuclear power should have been a strategic calculation that strengthening relations with India will help to counterbalance China's rise. Now is the time for Japan to make a similar strategic calculation and strengthen its relations with India in such fields as foreign policy, economy and military affairs. Japan must shed its anti-nuclear arms obsession that has impeded Japan-India nuclear cooperation and sign a nuclear cooperation agreement with India at an early date.

Another Indian policy which is alleged to be a major constraint on civil nuclear cooperation with India is the Indian Civil Liability for Nuclear Damages Act, 2010. This act makes the operators of electric utilities as well as manufacturers/suppliers of reactors liable in case of an accident, which could deter foreign manufacturers from making their way into India. The Act, which came into force on 11 November 2011, has reportedly been pointed out by the US as not in line with the international nuclear liability principles reflected in the Convention on Supplementary Compensations for Nuclear Damages.

Clause 7 of the Act defines the share of financial liability for each of the culpable groups. It states that the operator will have to pay Rs. 500 crore and the remaining amount will be paid by the Indian

government. However, there are two important clauses which make the situation difficult for foreign suppliers and manufacturers.

The Act, firstly, grants the operator the right to recourse the liability and to reclaim any compensation from the supplier. Section 46 of the Act makes the supplier subject to any other law in India on Industrial accident. This largely broadens the principles on suppliers' liability, thus acting as an impediment. The Supreme Court of India has held most of the international agreements as non binding and thus has emphasized the need for a specific legislation in order to ensure that the rights of the citizens are protected. While the Civil Liability for Nuclear Damages Act has been made to uphold the same, the Government of India's recent decision not to cover Kudankulam 1 and 2 under the Act as they are governed by an inter-government agreement with Russia, have called into question the purpose of the Act. It also brings doubt in the minds of foreign governments and suppliers, making it difficult for them to take any commercial decisions in such an uncertain atmosphere.

While clarification on suppliers' liability in the Indian Civil Liability Act is necessary, the argument for suppliers' liability itself is strongly upheld in India, especially after the case of Bhopal Gas Tragedy. The tragedy had resulted in 3,900 immediate deaths and more 8000 deaths reported in subsequent weeks after the explosion in Bhopal, along with 70,000 cases of severe injuries. The compensation offered by Union Carbide stands at \$470 million, which is extremely low, if we compare it with the recent case of blast and oil spill in the Gulf of Mexico, where 11 workers died, and BP, the British oil company, had to pay \$4.5 billion as a settlement. Considering the case of Union Carbide and Bhopal Gas Tragedy, Indian public is of the opinion that such a step is indeed necessary to ensure that rights of the citizens are protected.

(D) Cooperation on Cyber Security

With the advance of the Internet technology, computers have become essential to the governments' functions, industrial activities and the people's everyday lives. An era has arrived in which an attack on a country's computer system could inflict devastating damage on a national scale. Cyberspace is now called the "fifth battleground," along with the conventional battlegrounds of land, sea, air and outer space. In the case of cyber attacks, it is difficult to identify the attackers with the currently available technologies. Attackers could easily disguise their identity. Also, attackers are not necessarily nation states. Non-state organizations and individuals (e.g., terrorists and fanatical nationalists) may launch cyber attacks. Moreover, there is not any international framework for controlling cyber attacks. Therefore, protecting critical national infrastructures as well as the people's lives against cyber attacks has become a national challenge in countries around the world.

India is at an advantage as its IT industry, including software development, has achieved remarkable growth and it has an abundance of well-educated young people. Japan excels in the development and production of semiconductor chips, nanotechnology and artificial intelligence. There is ample room for Japan and India to cooperate with each other in the field of cyber security by pooling their respective strengths. **Detailed list of mutually beneficial action plans on cooperation in cyber security is mentioned in Appendix-II.** There will be no constitutional problem on the Japan side with transfer of cyber technology from Japanese private companies to India or with joint research and development between Japanese and Indian companies. However, as was explained in the

section concerning the defense industry and technology cooperation, the transfer of dual-use products and technology from Japan to other countries is regulated under the three principles on arms exports and the security trade control system. Therefore, export, co-development and co-production of some products and technologies, such as high-performance computers and software, may be subject to the regulation even if the main purpose of the transfer is for cyber security.

▼ Possibility of Cyber Security Cooperation between Japanese and Indian Defense Authorities

In September 2011, a cyber attack on a major Japanese defense contractor came to light. It was later reported by the media that a subsequent investigation found no evidence of the theft of very sensitive national defense information or nuclear power technology. Nonetheless, this incident made it clear that the countermeasures taken by the Japanese government over the previous decade were insufficient.

The incident prompted the Japanese government to launch various initiatives. For example, the Ministry of Internal Affairs and Communications, the Ministry of Economy, Trade and Industry and the National Police Agency created or expanded systems for sharing of information on cyber attacks between the public and private sectors. The Ministry of Defense revised its regulations so as to require immediate reporting of cases of virus infection and illegal access involving servers and computers used by defense industry. It also decided to create in fiscal 2013 a “cyberspace defense force,” which responds to cyber attacks on an around-the-clock basis.

Despite such efforts by relevant government ministries and agencies, the Japanese government is falling short of implementing strong countermeasures against cyber attacks in an integrated manner. There is not clear consensus even over the fundamental issue of which organization is responsible for protecting Japan's critical national infrastructures against cyber attacks.

In a "normal country," it should be up to a defense ministry or a military force to respond to a national emergency like a cyber attack on critical national infrastructures. In Japan, however, although the Ministry of Defense and the Self-Defense Forces (SDFs) are responsible for protecting the SDF's information systems and communications network, they are not charged explicitly with the task of protecting critical national infrastructures as a whole.

One major problem for the SDFs is that their operation is governed by a "positive list" system, which means that they cannot engage in activities that are not specifically designated as part of their mission. Military forces of normal countries are operated based on a "negative list" system, which means they can engage in any activities other than those that are specifically prohibited by laws. However minutely the mission of the SDFs may be specified under a law, an emergency not provided for by the law could occur. Therefore, the SDFs' operation should shift from a positive list system to a negative list system so as to conform to international standards.

Given the constraints imposed by the current positive list system, the SDFs can in principle take military action only when Japan has been hit by an armed attack from abroad or when the government recognizes an imminent threat of such an attack. The four types of armed attack that the Japanese government has assumed until now

(landing invasion, attacks by guerillas or special operation forces, ballistic missile attacks, and aerial intrusion) do not include cyber attack.

However, the Ministry of Defense and the SDFs are exploring the possibility of taking actions against cyber attacks on Japan's critical national infrastructures, as is indicated by a guideline entitled "Toward Stable and Effective Use of Cyberspace", which was announced by the Ministry of Defense in September 2012. The guideline stipulates that "in the event of a cyber attack as part of an armed attack, the Ministry of Defense and SDFs are tasked with responding to it." This suggests that the Ministry of Defense and the SDFs can take action against a cyber attack albeit under a very restrictive condition that it is launched as part of an armed attack. In light of this, we may say that a favorable environment is being created for discussions about specific cooperation on cyber security between the Japanese and Indian defense authorities even under the current Japanese legal system.

However, the Japanese government should go further and consider expressing its readiness to regard a cyber attack involving a foreign government as an armed attack and exercise its right to self-defense, depending on the extent of the damage caused. The U.S. government has already expressed its readiness to recognize a cyber attack as an act of war under certain conditions and exercise its military power as a means of defense.

Needless to say, if the SDFs are to engage in international cyber security cooperation in earnest, it is essential to shift from a positive list system to a negative list system, permit the exercise of the right to collective self- defense through the revision of the government's

interpretation of the constitution and make it possible to develop cyber offensive weapons by removing the constraints imposed by the "exclusively defense-oriented policy" through constitutional amendment.

PART IV: COOPERATION AT INTERNATIONAL ORGANIZATIONS AND OVER REGIONAL ISSUES

(1) Cooperation at International Organizations:

Item 31 of a joint statement signed on December 28, 2011 by then Japanese Prime Minister Yoshihiko Noda and Indian Prime Minister Manmohan Singh refers to the reform of the United Nations Security Council as follows:

“The two Prime Ministers reaffirmed their resolve to realize reform of the United Nations Security Council, including its expansion in both permanent and non-permanent categories. They concurred in participating actively on this basis in the intergovernmental negotiations in the UN General Assembly and decided to redouble their efforts, so as to make the Security Council more representative, legitimate, effective, and responsive to the realities of the international community in the 21st century.”

In short, the two prime ministers recognized that the main objective of the reform of the Security Council is for both Japan and India to obtain permanent council seats and expressed their resolve to “redouble their efforts” by “participating actively in the intergovernmental negotiations.”

However, it is inconceivable that China, which holds a veto as a current permanent council member, will support a reform of the Security Council that will increase the influence of India and Japan. China has for long adopted an obstructionist posture in this regard, and has done all it could to prevent the induction of new permanent

members of the UNSC. It is clear that it does not want any other permanent member from Asia.

Moreover, a proposal to give Japan, India, Germany and Brazil permanent seats at the Security Council (G-4 proposal) has met with objections from countries which regard them as regional rivals, such as South Korea, Pakistan, Italy and Argentina. There is also a widespread view that adding Germany as a permanent member is out of the question because the presence of two Western European countries, the United Kingdom and France, as permanent members of the current Security Council, is already unfair, so the European Union should be made a permanent council member representing Europe as a whole.

For amendments to the U.N. Charter to come into force, they must be "adopted by a vote of two thirds of the members of the General Assembly and ratified ... by two thirds of the Members of the United Nations, including all the permanent members of the Security Council." In 1965, an amendment intended to increase the number of non-permanent members of the Security Council from the initial 6 to 10 was adopted and put into force. However, increasing the number of permanent members would be different in quality from that reform.

The possibility is very small that an amendment to the U.N. Charter that would add Japan and India as permanent members of the Security Council will be adopted, not to mention put into effect, in the foreseeable future. Although we will try to get permanent membership of the Security Council, the Japanese and Indian governments should not impose self-restraint on themselves in their policymaking and implementation as a way to win the approval of China, which holds a veto as a permanent council member.

While trying to get permanent membership of the Security Council is a fruitful area of Indo-Japanese cooperation, Japan and India should also make efforts to use international frameworks other than the United Nations. Item 23 of the above-mentioned Japan-India joint statement reads as follows.

“The two Prime Ministers reaffirmed their support for the East Asia Summit (EAS) as a forum for dialogue on broad strategic, political and economic issues of common interest and concern with the aim of promoting peace, stability and economic prosperity in East Asia. They acknowledged the significant role the EAS can play as a forum for building an open, inclusive and transparent architecture of regional cooperation in the Asia-Pacific region. They welcomed the participation of the United States of America and the Russian Federation in the EAS. They expressed support for the EAS as a Leaders-led forum with ASEAN as the driving force.”

Unlike in the U.N. Security Council, where China has a privileged status, Japan and India have equal rights with China in the EAS. The EAS is also different from an “East Asia Community” proposed by former Japanese Prime Minister Yukio Hatoyama in that EAS includes the United States, which is important as a counterweight against China. The EAS is just one example of international frameworks which we should strive to develop and focus upon while seeking to realize the reform of the U.N. Security Council.

On matters requiring international military cooperation, although we recognize and uphold the importance of a resolution by the UN Security Council, we should not just wait for a resolution and must form a coalition of the willing nations led by Japan, India, the United States and Australia, and act flexibly in a timely manner.

Similarly, the two countries need to work together on non-proliferation issues. Even though India is not a signatory of the NPT, there are issues on which both can work together. As, for example, in the on-going question before the NSG on Chinese assistance for Pakistan's Chashma 3 and 4, a country like Japan is well-placed to raise objections to this project. Other members of the NSG are likely to join in objecting to the violation of NSG rules that the project represents. Equally, China needs to be brought around to putting more effective pressure on North Korea to cease its nuclear and missile-technological activities.

As far as Indian membership at the NSG is concerned, Japan will have a crucial role to play in generating a consensus which favors India's inclusion to the Group.

(2) Advantages of the Japan-India Cooperation and Challenges to be overcome

Japan and India have a strong sense of familiarity with each other. That is particularly notable in the closeness between their historical outlooks. It is well known that at the International Military Tribunal for the Far East (also known as the Tokyo War Crimes Tribunal), which unilaterally condemned Japan as an aggressor nation, Judge Radhabinod Pal of India insisted that all defendants were not guilty, arguing that the Allied nations did not have the right to pass judgment on Japan.

Japan and India share universal values, such as freedom, democracy, the rule of law and respect for human rights. We are standing at a new frontier where the wave of change which was triggered by the Arab Spring and spread to Myanmar is significantly transforming the

dynamics of international politics. We are in the midst of a conflict between a group of countries that upholds universal values and a group that maintains other values.

The two groups are vying for supremacy in various places in Asia and the Middle East, and in the Western Pacific and the Indian Ocean. Among Asian countries, Japan and India are the best suited to uphold universal values, along with other democracies in the region. Japan and India also have enough potential power to pursue values-oriented diplomacy. The two countries are destined to be awakened to their own power and roles and shape the future of Asia while cooperating with other countries which share universal values, including the United States.

Japan and India also share political, economic and national security interests. Both countries are concerned over China as it is increasingly becoming assertive and aggressive in line with the growth of its national strength. Moreover, the economic ties between Japan and India are strengthening as mentioned in Part III. If the two countries join hands with each other, their combined strength will be adequate to bring stability to the region and serve to act as a restraint on Chinese power, both militarily and economically. There are few other pairs of countries which share values and capabilities so clearly as Japan and India. Therefore, it is natural that Japan and India become partners. The important thing to do in developing the Japan-India partnership is to make the two countries stronger than now and maximize the effects of their cooperation so that they can effectively counter China's rise.

However, at the moment, there are several constraints on the Japan-India partnership. The first is that India remains concerned about not only the maritime dimension of its military security, but

equally, the situation on its land borders. There has been a history of hostility from the China-Pakistan nexus coupled with terrorism. The western world has not been, and is not, sufficiently responsive to Indian concerns in this regard. Afghanistan and the situation likely to develop there after the withdrawal of the western armed forces is another serious issue for India, and there is not enough coordination between India and the west in this regard as well. There is also the issue of US-Chinese joint statements issued at the highest level, suggesting that China would have a role in ensuring security in South Asia. This postulate is unacceptable to India. While the United States and India have now developed a friendly relationship, strengthening bilateral ties in the fields of foreign policy, economy, national security and energy, India is still worried about the possibility that the United States may join forces with China again in an attempt to dominate global politics through a US-China duopoly.

The second constraint is Japan's frequent change of prime ministers which has stymied efforts to resolve important pending issues. For example, some Indian strategists attributed the stalemate in the negotiations over a Japan-India nuclear cooperation agreement to the frequent change of prime ministers in Japan. If the current ruling coalition led by Prime Minister Shinzo Abe, which understands the importance of the strategic partnership between Japan and India, consolidates its power base by winning a victory in elections to the House of Councilors scheduled for July 2013, Japan will be ready to vigorously tackle pending Japan-India issues, including the nuclear agreement.

Third, Japan has been unable to perform its role as a responsible nation in relation to global security issues because of the constraints it has imposed on itself. We welcome the revision of Japan's three principles on arms export that was made in December 2011 by the

government of then Prime Minister Yoshihiko Noda as the first step in correcting our country's excessive pacifism in the postwar era. However, Japan has not yet decided to remove restrictions on exports of defense equipment and technologies to India or to engage in joint development and production. Moreover, there are still a lot of more fundamental challenges that Japan must tackle, such as changing the government's understanding that the Japanese constitution does not permit the exercise of the right to collective defense and amending the constitution in a way that makes it possible to transform the Self-Defense Forces into a normal military force.

(3) Cooperation on Regional Issues

i. Tibet

Tibet is an issue of serious and urgent concern. Three aspects of this problem require the attention of the international community. The first is Human Rights: the continued self-immolations taking place in the Tibetan-inhabited parts of China, apart from the Tibet Autonomous Region, are a reflection of the despair and unhappiness within the Tibetan community. According to Kate Saunders, Communications Director of the International Campaign for Tibet, since February 2009, some 107 Tibetans have lit themselves on fire in China, including a 19-year-old female student, a widowed mother of four, and the grandfather of an important reincarnate lama. The Chinese official News Agency, Xinhua, however, reported a regional party official saying that "no one, absolutely no one whatsoever, has ever self-immolated in Tibet Autonomous Region". Meanwhile, the Communist Party of China has been attempting to fight off such activities of self-immolation by introducing a "monastic management" plan to more directly control religious life. As part of the plan, 21,000

party officials have been sent to Tibetan communities with the goal of “befriending” monks — and creating dossiers on each of them. The plan also includes the distribution of one million national flags and portraits of Mao Zedong and other party leaders — with a requirement that they be displayed at homes and monasteries. However, the strong militarization and complete ignorance of the Tibetans’ demands is likely to make the situation worse.

The second concerns the water diversion and plans for dams on the rivers that originate in Tibet. Through its control over Tibet, which is the water tower of Asia, it is seriously endangering the environment of the lower riparian states – whether in India through the River Brahmaputra or in Southeast Asia through the River Mekong. China has continued its policies of diversion of the waters of the major rivers in Tibet, and of indiscriminate building of dams, which have again led to hardships for the lower riparian states. Tibet is itself becoming an ecological disaster zone, and is inflicting similar troubles on neighbouring countries.

The third is the UN General Assembly Resolution of 1961 that calls for self-determination for Tibet; although the Dalai Lama has accepted that Tibet will not seek independence from China, what he has called the “cultural genocide” continues.

ii. Uyghur

Another critical situation is that of the Uyghurs living in Xinjiang/ East Turkestan. The province is strongly divided by deep-rooted ethnic biases because of the heavy Han Chinese migration which the Chinese state have encouraged since 1950s, in order to gain control over the oil and gas rich region. Ethnic tension in Xinjiang has been

fueled further by economic disparity: the Han tend to be wealthier than the Uyghurs in Xinjiang. The wage gap is the result of discriminatory hiring practices. Uyghurs are upset by what they consider Chinese attempts to refashion their cultural and religious identity. Rebiya Kadeer, who heads the World Uyghur Congress (WUC) based in Germany, has condemned China for its fierce repression of religious expression and its intolerance for any expression of discontent.

Although Beijing officials have always asserted that they respect China's ethnic minorities and have improved the quality of life for Uyghurs by raising economic, public health, and education levels in Xinjiang, the flaring up of the 2009 riots in Xinjiang captured the reality on ground. In July 2009, ethnic tensions between the Han and Uighur communities were finally exposed to the international community after severe riots between the two groups and police forces erupted in Urumqi, Xinjiang Uyghur Autonomous Region's capital. The riots were reportedly sparked by a Uyghur protest over the ethnically motivated killing of two Uyghur workers in the southern province of Guangdong.

The economic incentives which China assured to give to the Uyghurs after the riots, however, have not been able to lift off the structural challenges that continue to create brutal clashes between Uyghurs and Han Chinese. In May 2012, the World Uyghur Congress held its 4th General Assembly in Tokyo. During the meeting, Rebiya Kadeer stated that, while the Uyghurs were fighting for their rights and were protesting against China's oppression till 2009, now they face a fight for their existence and that the situation is now worse than it was in 2009.

iii. Mongols

Mongols who live in the Inner Mongolia Autonomous Region (Southern Mongolia) are also facing a critical situation. To be more specific, there are such problems as the economic inequality between Han Chinese and Mongols living in the region, the destruction of the environment due to development activities and the loss of the traditional Mongolian culture.

An incident emblematic of the situation occurred in May 2011. On grassland in Xilinhot, a city in the eastern part of the Inner Mongolia Autonomous Region, a nomadic activist was deliberately run over by a truck driven by a Han Chinese. That area was the source of a dispute over air pollution and destruction of pastures due to the development of an open-pit mine. A group of nomads resorted to acts of force, such as erecting a barricade of tractors to obstruct the passage of trucks carrying coal.

Although the direct trigger of the truck attack incident was the dispute over air pollution, there were also underlying factors such as: Han Chinese people's contempt for the pastoral life-based Mongolian culture; the dominant Han Chinese presence in the higher echelon of the regional government; and what Mongols call a "plunder of resources by Han Chinese."

In the wake of the truck attack incident, protests frequently occurred in various areas of the autonomous region, resulting in clashes with armed police, injuries and arrests. In Xilinhot, thousands of Mongolian high school students participated in protests. The wave of protests jolted the Chinese government because Mongols had not staged a major protest since the 1980s.

Mongols saw the southern part of their land integrated into the Chinese territory as the Inner Mongolia Autonomous Region after the establishment of the People's Republic of China in 1949. During the Cultural Revolution in China, the Inner Mongolian People's Revolutionary Party, which advocated Mongolian self-determination, was labeled as a "counter-revolutionary group" and many Mongols suffered a harsh crackdown by the Chinese authorities, including the military. It is estimated that hundreds of thousands of Mongols were purged in those days. A Mongolian-born scholar Yang Haiying (alias Oghonos Chogtu) has condemned the oppression as an act of genocide, pointing out that of the nearly 1.5 million Mongols who lived in the region, 350,000 were arrested, 28,000 were murdered and 120,000 suffered from the after-effects of torture.

From the 1950s to the era of the Cultural Revolution, 10 million Han Chinese immigrated into the region. Currently, Han Chinese account for more than 80% of the population of the Inner Mongolia Autonomous Region. In every facet of life, ethnic Mongolian elements have almost been lost. As Mongolian language education has virtually disappeared, the region was "Hannized" and Mongols cannot but use the Chinese language.

APPENDIX - I

Safe Ocean and Save Ocean Initiative

(A) Oceans: Nature and Character

The sea has many uses for humankind. It is a source of protein and food -- not forgetting common salt -- for a large part of humanity; it is the global common for the intercontinental transportation of goods; it is a source of minerals, hydrocarbons and energy; it facilitates the global weather system and its transoceanic currents sustain the earth's weather system; and, the sea remains a fascinating source of employment, entertainment and adventure. The sea is also the earth's largest garbage dump. Dredged material, agricultural and industrial wastes, sewage, and radioactive waste are amongst the deadly wastes¹ that are dumped at sea. Since there is no policing of the high seas, alarming quantities of garbage and toxic wastes are regularly thrown out to sea which endangers all of mankind. International conventions exist but the onus of implementation is with the flag state and usually only perfunctory supervision is left to the marine police or the coast guard.

¹ "Waste dumped into the ocean is categorized into the black list, the gray list, and the white list. On the black list are organohalogen compounds, mercury compounds and pure mercury, cadmium compounds and pure cadmium, any type of plastic, crude oil and oil products, refined petroleum and residue, highly radioactive waste, any material made for biological or chemical warfare. The gray list includes water highly contaminated with arsenic, copper, lead, zinc, organosilicon compounds, any type of cyanide, fluoride, pesticides, pesticide by-products, acids and bases, beryllium, chromium, nickel and nickel compounds, vanadium, scrap metal, containers, bulky wastes, lower level radioactive material and any material that will affect the ecosystem due to the amount in which it is dumped. The white list includes all other materials not mentioned on the other two lists. The white list was developed to ensure that materials on this list are safe and will not be dumped on vulnerable areas such as coral reefs. Source: <http://marinebio.org/Oceans/Ocean-Dumping.asp>

The sea is also the earth's largest tract of space with no definitive ownership or governance -- a lawless expanse where law exists but is not enforceable. The opaque vastness, veiled anonymity and limited governance of the oceans create their own challenges for legitimate state forces to maintain maritime order at sea. It also simultaneously offers great opportunities for miscreants of all types to do mischief, destabilise and create insecurity. Particularly, as the International Maritime Organisation notes, "*... Without shipping, it would simply not be possible to conduct intercontinental trade, the bulk transport of raw materials or the import/export of affordable food and manufactured goods – half the world would starve and the other half would freeze!*"

(B) Risks in the Oceans

The risk to maritime order in the global oceanic commons and the vulnerability of the maritime frontier in the littorals can emerge from nation states, hybrids, barbarians and environmental threats -- either human induced or engineered, or divinely ordained as natural outcomes of non-sustainable development. A top level source analysis for risks in the oceans would reveal that they can originate from the sea and at sea:-

- I. Threat to national sovereignty
- II. Piracy
- III. Attack on offshore oil/gas platforms and single buoy moorings
- IV. Attack on a port facility/harbor terminal
- V. Attack on ships at anchorage or alongside
- VI. Attack on near coast nuclear/industrial installations
- VII. Indirect attack on harbours by disrupting safe navigation by sinking ships/boats in straits/narrow channels
- VIII. Infiltration for attacks in the hinterland
- IX. Dumping of toxic wastes and chemicals at sea

- X. Derelicts and sinking of vessels at sea
- XI. Trafficking in drugs, small arms and weapons
- XII. Illegal human immigration
- XIII. Illegal exploitation of minerals
- XIV. Illegal fishing and poaching
- XV. Illegal destruction of coral reefs in isolated islands for profit
- XVI. Spillage of oils and hydrocarbons – inadvertent or deliberate

With the requirement for fitment of Automated Identification Systems having become mandatory on vessels greater than 300 tonnes, the Container Security Initiative gaining increasing acceptance and the implementation of the International Ship and Port Security Code, the option of using small vessels for terrorist operations is attractive. Small crafts and submersibles for smuggling of not just drugs, commodities and metals, small arms and light weapons but also sea borne terrorist strikes have become a specialized forte of the terrorists and criminals. Terrorists sailed into Mumbai, western India, undetected in 2008, in a small vessel using only commercial off-the-shelf navigation aids, to unleash an unprecedented attack from the sea. High speed crafts, packed with IEDs and high explosives, have been also used as suicide boats to ram into bigger vessels and such an operational strategy is not difficult to implement even today in a busy port. The threat envelope at sea, particularly in closed harbours and ports, therefore, now includes small vessels and shallow semi submersibles also.

Therefore, it is important at this juncture to reassess threats, quantify risk associated with these threats and prioritize maritime programs in the interest of developing a model for comprehensive maritime security. These assessments, seen at both a domestic and international level can provide direction towards a new architecture and a multilateral mechanism for safe oceans and to save oceans to secure the global commons on which much of international commerce, regional stability and national security rides.

Such peace and stability operations require coordination and interoperability between governments, their navies and within their own bureaucracies. Faced with this terrorist threat from the sea, fundamental changes in the international maritime security environment have been engineered through regulation of international shipping with the introduction of the International Ship and Port Facility Security code, Container Security Initiative, Proliferation Security Initiative, etc. In addition, advanced technologies of automatic messaging, sophisticated on line ship/crew database, seamen screening systems have provided some respite. However, no one nation or agency can mitigate the threat of maritime terrorism on its own strength.

It therefore opens up an opportunity for Japan and India to launch a Safe Ocean and Save Ocean Initiative.

(C) Political Foundation for Affirmative Initiative

The Joint Statement On the Roadmap for New Dimensions to the Strategic and Global partnership between India and Japan ², signed by prime ministers Shinzo Abe of Japan and Manmohan Singh of India, declared on August 22, 2007 that “The two leaders recognised that Japan and India share common interests in such fields as maintaining the safety and security of sea lanes in the Asia Pacific and the Indian Ocean regions, and fighting against transnational crimes, terrorism, piracy and proliferation of Weapons of Mass Destruction. The two leaders directed respective authorities to study future course of cooperation in the security field between the two countries and to report to them by the time of Indian Prime Minister's visit to Japan.”

The Memorandum of Cooperation (MoC), signed between the two

² Joint Statement On the Roadmap for New Dimensions to the Strategic and Global Partnership between Japan and India, Source: <http://www.mofa.go.jp/region/asia-paci/pmv0708/joint-2.html> , accessed on October 15, 2011.

Coast Guards on 24 November 2006, which stipulates that the heads of the two organizations meet alternately in India and Japan, to discuss maritime issues of mutual concerns and formulate a cooperative approach to address these.

The Memorandum of Cooperation between the two Coast Guards encompasses issues of maritime search and rescue, combating marine pollution, technical assistance for responding to natural disasters and exchange of information regarding crimes at sea, including smuggling and illicit trafficking.

The first ICG-JCG combined exercises were carried out in November 2000 off Chennai, southeastern India, in which one JCG ship participated and was overseen by a high level delegation of JCG, led by the then Commandant of JCG. This also laid the foundation for development of close interaction between the two organisations that included regular visits and exercises, sharing of information and expertise and training visits.

During the 11th ICG-JCG High Level discussions, it was mutually agreed to strengthen the cooperation on evolving collaborative approach, in addressing a spectrum of maritime issues concerning safety and security. The visit was also very significant in providing renewed impetus to strong ties that exist between the two Coast Guards as the Japan Coast Guard Ship has visited India, after a gap of six years, for the combined exercises with the ICG off Chennai.

A delegation from the Information Sharing Centre, Singapore, established under the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) also participated in the exercise. This was significant in furthering the interaction among the participating agencies on anti-piracy issues.

Speaking at the Naval Commanders Conference, Indian Defence Minister AK Antony "assured India's maritime neighbours of the

country's unstinted support for their security and economic prosperity". Addressing the top brass of the Indian Navy and MoD, Antony said the Indian Navy has been "mandated to be a net security provider to island nations in the Indian Ocean Region". He added that, "most of the major international shipping lanes are located along our island territories. This bestows on us the ability to be a potent and stabilising force in the region".³

More recently at the India-Japan Defence Ministers meeting in November 2011, according to an Indian press release, "Shri Antony said the other serious issue in maritime security concerns the freedom of navigation and maintaining the security of the Sea Lines of Communication (SLOC) to facilitate unhindered trade by the sea routes. This is of vital importance to all countries which depend on maritime trade. 'India supports freedom of Navigation in international waters and the right of passage in accordance with accepted principles of international law, including the United Nations Convention of the Law of the Sea [UNCLOS]. These principles should be respected by all', Shri Antony said." It is also significant that the press release noted that "two sides exchanged views on regional and international security and decided to step up defence cooperation and exchanges between the two countries"⁴.

On the basis of these talks, there exists an opportunity to develop a model for a future course of cooperation to mitigate these risks. Such a model is now proposed.

(i) Maritime Automated Routing and Reporting System (MARRS)

³ Press Information Bureau, October 12, 2011. Source:

<http://pib.nic.in/newsite/erelease.aspx?relid=79956>

⁴ Press Information Bureau, November 03, 2011 Source:

<http://pib.nic.in/newsite/erelease.aspx?relid=76976>

At the international level, there is the foremost requirement to regulate global sea borne traffic more accurately since early detection of emerging threats allows better resource application. This would require basically two divisions of work. First is the surveillance and monitoring aspect, and the second is the enforcement function.

So far as surveillance and monitoring is concerned rapid strides have been made through the aegis of the IMO in the last decade. The next step would be to adopt an internationally accepted, Maritime Automated Routing and Reporting System (MARRS), operationalised through the respective NAVAREA coordinators with the objective of globally consolidating real time maritime domain awareness through a shared common operational picture. The basic concept would be to organize the sea lines of communication into specified routes (outbound and inbound) with geographic reporting points (usually crossing points between different routes) that would be managed by the NAVAREA coordinator. Transfer of the operational plot, AIS or LRIT⁵ information, would be formalized in a manner that when vessels CHOP (a naval acronym for Change of Operational Authority) from one NAVAREA to another, control and monitoring responsibilities are also transferred concurrently in a formal manner.

One method would be to adopt the Flight Plan Concept followed in

⁵ “The new regulation on LRIT is included in SOLAS chapter V on Safety of Navigation, through which LRIT will be introduced as a mandatory requirement for the following ships on international voyages: passenger ships, including high-speed craft; cargo ships, including high-speed craft, of 300 gross tonnage and upwards; and mobile offshore drilling units.The LRIT information ships will be required to transmit include the ship's identity, location and date and time of the position. There will be no interface between LRIT and AIS. One of the more important distinctions between LRIT and AIS, apart from the obvious one of range, is that, whereas AIS is a broadcast system, data derived through LRIT will be available only to the recipients who are entitled to receive such information. Source: http://www.imo.org/safety/mainframe.asp?topic_id=905

the aviation sector which necessarily requires every aircraft to file a flight plan before it is allowed to get airborne. Similarly an Ocean Passage Plan, with specified Estimated Time of Arrival (ETA) at different points of the route supplemented with a Position, Course and Speed (PCS) report rendered every four hours would pretty much map the entire sea borne traffic. Delays in ETA or diversion without intimation at the next reporting station can set off alarms and such violations are immediately recognized and corrective actions initiated before these assume crisis proportions. This must not be seen as an intelligence gathering activity but one of procedural conformity for maintaining good order and traffic in the global commons for the common good. Though the international mandate is for fitment of AIS and LRIT only on vessels more than 300 tonnes, national legislation should reduce this requirement to vessels upto 10 tonnes with Distress Alarm Transmitters (DAT) included. Navies could cite security and other constraints to share information on warship movements, but this would have to be overcome by larger considerations and warships must not be exempted from these devices but with appropriate security overlays to protect operational security. Working on such an agreed protocol may take many years but work must begin.

(ii) Asian Multilateralism: Indian Ocean Maritime Constabulary

The second proposition is that of enforcement of international law in the global commons. Maritime security cannot be either controlled or even managed by the action of any one state however powerful or omniscient. Neither are ectopic crisis management organisations such as ad hoc Task Forces a solution which, at best, achieve consequence management and give what are essentially constabulary functions an avoidable military character. Instead Policing Forces are a more acceptable force in proud countries and democracies. The stakeholders are numerous and their efforts and interest are

dispersed and collating a common operational picture through a seamless transfusion of information backed up by First Reaction Forces, either international, regional or national -- voluntarily organised or forcefully implemented -- is a must if comprehensive maritime security becomes a recognizable reality in the future for the global good.

Here we would draw attention to note that the US is not an extra-regional power in the Indian Ocean Region. Like the French the US is an Indian Ocean power as well and therefore has legitimate stakes in stability of the IOR. Hence, it is proposed that India and Japan together with the US take the initiative of creating at least a voluntary Ocean Policing Force (OPF) -- an international instrument of law enforcement with specific jurisdiction limited to the high seas -- drawing upon all maritime assets -- that is not only Coast Guard, Naval or Marine Police but also mercantile -- of Australia, France, India, Japan, South Africa, and the U.S. that would implement the MARRS proposed earlier. Subsequently membership would be expanded. This proposal is a modification of Rear Admiral Kazumine Akimoto's suggestion of the Ocean Peacekeeping Force.

In essence the OPF must have a clearly defined constabulary role and organized under the leadership of a duly appointed "Superintendent" with appropriate authority, duty and responsibility commonly concurred by the participating states. This OPF could actually supplant the naval forces deployed for anti-piracy missions.

APPENDIX - II

Japan-India Cooperation in Cyber Security

(A) Common Challenges

Extensive mutual dependencies of modern states and global connectivity have created a new battleground. Enemies can bring down a nation to its knees in this highly connected world. Worse still, the enemy need not be another state but a small group of non-state actors or terrorists. Thus asymmetric attack methodologies in the hands of states have enhanced their capabilities along with deniability. This new form of warfare has no precedence and international convention to govern and minimise the human misery, thus poses unprecedented challenges. Recent identification of 'Stuxnet' worm which wreaked havoc on Iranian nuclear facilities has converted the perceived technologies into reality.

Both India and Japan faces the common challenges to the safety and security of their citizens and national assets. This provides enormous scope of cooperation in safety and defence of cyberspace. Technically all the tools techniques and procedures useable in cyber attacks are also useable in day-to-day cybercrimes, therefore the cooperation can be at pitched at much higher level in comparison other facets of security cooperation, while staying within the limitations imposed by the constitution of Japan.

China- Over the last few years, some serious cyber intrusions have come to the light originating from the servers located in China. Though China has denied all the allegations, it had been implementing an Information Warfare (IW) plan as early as in 1995, and since 1997 has conducted numerous exercises in which computer viruses have been used to interrupt military communications and public broadcasting systems. In April 1997, a 100-member elite corps

was set up by the Central Military Commission to devise ways of planting disabling computer viruses into enemy command and control defence systems. Since then various reports have emerged under very interesting name such as Operation Aurora, Operation Night Dragon, Operation Ghostnet, etc. According to some reports PLA IW units have reportedly developed “detailed procedures” for cyber warfare, including software for network scanning, obtaining passwords and breaking codes, and stealing data; information-paralysing software, information-blocking software, information-deception software, and other malware; and software for effecting counter-measures. These procedures were tested in field exercises since about 2000. For example, 500 soldiers took part in a network-warfare exercise in Hubei province in 2000 in which simulated cyber attacks were conducted against Taiwan, India, Japan and South Korea. In another exercise in Xian, ten cyber-warfare missions were rehearsed, including planting (dis)information mines; conducting information reconnaissance; changing network data; releasing information bombs; dumping information garbage; releasing clone information; organising information defence; and establishing “network spy stations”. Thus China poses serious potential threats to India and Japan.

(B) Mutually Beneficial Actions/plans

Joint action plan can be developed under following heads:

· Under present Japanese Constitutional Regime

o **Security Operation Centres** – Product based information security is a reactive solution, which evolves out past experience of cyber-attacks.

When Critical Information Infrastructures (CII) are required to be protected, it needs continuous and on-line vigil and pro-active defence. The Network Operation Centres (NOC) have limited focus on security matters, in fact reporting security incident can sometime be in conflict with the performance of IT services. Therefore separate

and very high-end SOCs are required. We need to jointly develop information security intelligent sensors which can be placed at vantage points in CII networks. Information from these sensors requires (like in real world) collation, co-relation, establishing normal behaviour baseline of various activities in the network, detecting abnormalities and signs of attack, initiating coordinated defensive mechanism to mitigate the threat. Thus SOC will require complex IT security tools and techniques, analytical tools and presentation technologies, and procedures & protocols to control any attempt to penetrate and adversely impact the CII.

o **Cloud Security** - Cloud computing will change the business functioning in similar manner as the Internet had changed it. Non-IT companies and most of the governance function will not be required to create their own IT infrastructure but can hire the computer resources from vendors (gmail, facebook, youtube are example of cloud computing). This will bring down the IT expenditure by as much as 80%, while efficiency and cutting edge technology can be introduced as Operational Expenditure (OPEX) rather than Capital Expenditure (CAPEX). However there is sense of loss of control over own data. Security is the major concern in cloud computing. Both nations can join hands to develop technological, as well as procedural mechanism to provide enhanced security and assurance for using cloud computing.

o **Chip level security validation mechanism and laboratories** - Both countries, especially Japan, are well advanced in chip designing, however due to financial constrains, chips are fabricated in third countries. In addition there are millions of chips developed and fabricated in other countries that are being used extensively not only in civilian sector but also in defence and law enforcement sector. These chips are required to be tested for installation and placement of malicious / spying insertion in normal functioning. Both countries can work together in developing chip level security validation mechanisms and laboratories which are cost effective. In addition

Japan may like to establish top-end chip fabrication industry in India. The running cost of such industry will be comparable with other countries, especially China, but more importantly the mutual trust level will eliminate the necessity of security validation of chips and enhance the assurance level. Any concerns about this cooperation between Japan and India need to be further discussed so as to remove any hurdles that might exist.

o **Assurance Framework** – There are several International Information Assurance frameworks such as ISO/IEC 15408, 27000 series, 20000 series etc. However their implementation is so costly that some of the proising nations themselves have moved to simpler solutions. India and Japan may work together to develop more cost effective but robust assurance framework. For this we may need to include other nations and organisations but India- Japan can jointly lead the initiative.

o **Cyber security and EW Sensors and agents** – Everyday new and more exotic waveforms are being created. The information getting packed in the older waveforms are also enhancing. The existing Electronic Warfare and Cyber security tools are required to cope with these changes at the same pace and products required to be developed around it. As sensors for detection relates to self-defence and is not an offense-oriented technology thus Japan probably can co-operate on this continuously under research field, without overstepping the limits imposed by her constitution.

o **Advanced malware detection and removal technologies** – Malwares like Stuxnet and Duqu which are believed to be the handiwork of some states, have changed the landscape of cyber threats from malwares. To mitigate such threats require different strategy and approach, artificial Intelligence probably be more suitable to deal with such malware. This requires intense cooperation between two nations.

o **IPv6 security related R&D** – IPv4 address distribution has come to an end since February 2011. Over a period of time IPv6 will become the standard. IPv6 has many inbuilt security features which make IPv6 packets difficult to track or crack. Point-to-point secure and masked tunneling is one of the in-built features of IPv6. These features throw next challenge to the Law Enforcement Agency as well as other security related functions. IPv6 is already rolling out and there exist no other alternative for the world but to migrate to IPv6. Therefore extensive research and development is required for nation-states to build appropriate tools, techniques, software, products and procedure for Law Enforcement as well self-defence. This also provides opportunities to be world leader in this new arena. Co-operation between India and Japan can produce wonderful results in this field.

o **Advanced Network devices** – In April 2010 by diverting almost 15% of world's Internet traffic from a single router, China has proven that it can hijack foreign internet traffic for the purpose of interception or disruption. Network devices are like 'road junctions' where most effective security control mechanisms can be placed and implemented. Both nations can collaborate to develop advanced network devices for secure and robust networks.

o **Crypto-analysis in cyberspace** – In a bygone era cryptology was only limited to defence forces, spies and diplomats, but today's networks depend heavily on cryptology tools to provide safe and secure communication. However these functionalities are being abused by criminals. Nation states also have legitimate right to intercept and analyse the enemy's communication. Both nations can work together to develop technologies for crypto-analysis ranging from password cracking to real-time analysing encrypted session.

o **Internet governance** – Over a period of last two decades there is a strong move towards democratization of the internet governance bodies. This momentum is required to be maintained and rights of

smaller and weaker states must be equally protected. To meet the challenges of cybercrimes, cyber conflicts and cyber wars, various treaties will be required to govern the conduct of member states. India and Japan can evolve a common strategy. A new common platform can also be created to have coordinated thrust in this direction. At the very least a consortium may be created to ensure that concerns of Asia-Pacific are not subordinated to the interest of Europe-America in this very important area.

- **After amendments to Japanese Constitution**

- o Battle ready networks for warzones
- o Electronic warfare products
- o Cyber Offensive weapons

Recommendations – To achieve the proposed action following tools are recommended.

- Cyber security MoU / Treaty
- Mutual Legal Assistance Treaty
- Cyber Crime information sharing and mutual support protocol
- Establishing Information Sharing protocols on cyber threats and incident handling
- Joint development of futuristic chip fab industry
- Establishing Chip level security validation laboratory
- Establishing Laboratories for implementation of ISO 15408
- Joint cyber security products development
- Coordinated effort in international fora
- Establishing consortium of Asia-Pacific nations for various international conventions to deal with Cyber crime, cyber conflict and cyber war