



## INDIA – UNITED STATES 2020

*United States, Europe, Nuclear Cluster*

### **Summary**

This report summarizes the conclusions of a study that was initiated earlier this year on the future of India United States relations in the coming decade.

The past decade has often been termed as the best years of India-US relations, denoted by the strategic partnership initiated during the Presidency of George W. Bush. The world's largest democracies have harnessed the synergies inherent in their common belief in pluralistic societies to cement the relationship at an unprecedented pace. The bilateral relationship thus navigated laid the foundation for cooperation over a wide spectrum of areas primarily covering defence, nuclear energy, space and high-technology trade, and economic cooperation. Both the governments have gone the extra mile to declare their optimism on the future of this relationship, and reiterate that the fundamentals of this partnership remain robust, the various hiccups notwithstanding.

The Strategic Partnership of 2005 laid out a roadmap for the two countries in the areas of economic growth and trade promotion, energy and the environment, democracy and development, non-proliferation and security, and high-technology and Space. An assessment of the past five years would show that different aspects of the Partnership are running at uneven pace. How will the relationship fare in the coming decade is the subject matter of this report.

This subject was studied in six major themes:

1. Security
2. Economic
3. Energy and Climate Change
4. Social and Community Development
5. Diplomacy and Global Cooperation
6. Non-Proliferation and Disarmament

## 1. Security

### Defence cooperation

Although defence cooperation between both countries both soft- joint exercises, frequent high level meetings- and hard- defence sales- have increased substantially in recent years, they have not yet reached their full potential. This has been mainly due to an incomplete understanding of each others concerns by both sides. While the US has a well defined and articulated international cooperation in security matters and a legally defined defence sales procedure, these have not been fully studied in India, and with not much expertise available on these matters, India has been cautious in its approach to enlarged defence cooperation with the US. The US, on the other hand, has very little experience in dealing with a rising power such as India, which has extensive industrial, scientific and technical base and is looking forward to an equal partnership with US in defence cooperation to the fullest extent possible. As a result many issues are kept pending or undergo extensive scrutiny with consequent delays as witnessed in the case of many pending defence agreements such as CISMOA, BECA , LSA and much more open defence commerce.

In order to reduce such roadblocks, it is necessary that in the first instance, defence agreements should be such that they do not impose unilateral or unequal demands on each other. CISMOA is an agreement in which one party imposes unilateral conditions on the other and is unlikely to be agreed upon by India at this stage and should not be insisted upon by US now. On the other hand, the US has long standing laws on the limits of defence transfers and India cannot demand a treatment superior to that offered by US to its military security partners such as NATO alliance, UK etc. However, the US should make sure that defence commerce between US and India follow along the lines of WTO members i.e. MFN treatment by one member to all members except for those joined by Free Trade Agreements. In a similar manner US should treat India in matters of defence transfers in no less favourable manner than it treats its other customers not bound by military alliance. In general if a principle of reciprocity and freedom of choice is maintained, the chances of further defence cooperation will be enhanced substantially especially in matters of cooperative defence research and coproduction opportunities.

### Counter-terror

India and the United States, the oldest and biggest democracies in the world are also victims of growing terrorism and hence can engage and share technical know-how and information in the field of counter-terrorism in the coming ten years or so. Though both countries have identified the need for cooperation in this front, it is yet to pick up momentum. The potential areas where substantial cooperation might evolve between these countries include intelligence sharing, cyber terrorism, creating a sound database, curbing proliferation of Weapons of Mass Destruction, Agro-terrorism. India by participating in several multilateral export control regimes such as NSG and MTCR, could

contribute to the global efforts to deny terrorist outfits materials, technology and know-how needed for the development of WMD. In this process, both the US and India, however, may have to overcome problems with regard to domestic constituency as well as legal provisions and rulings; geo-strategic compulsions and politic-military. The current cooperation between them, for various reasons, appears to be in the range from low uncertainty to medium uncertainty. A successful US-India counter-terrorism cooperation could attract more democracies to join in the common endeavour in the next decade in realizing the goal.

### **Cyber security**

Cybersecurity has increasingly drawing attention from policy makers as the world becomes increasingly interlinked and dependent on digital pathways. The sheer complexity of this medium, coupled with the rapidity of technological change has meant that much of the co-operation on framing the rules of the road has been at the purely technical level. Increasingly, though, the issue of cybersecurity is one that requires inter-governmental intervention since there are interlocking issues in the technical, business, legal, security and international policy arenas that have to be resolved. At the international level, the primary inhibitor has been the distrust amongst governments, who have impugned various motives, ideological and otherwise, behind the policy initiatives of the other.

Cyber security cooperation should be a natural area of cooperation between India and the United States for a number of reasons. The fact that both countries are democracies, with similar values sets aside the scope for distrust on ideological grounds. Furthermore, the two countries have also been at the receiving end of cyber threats both from state-sponsored and non-state actors. The structural complementarities between the two economies, especially in the services sector which is a major user of cyber networks provides further motive for the two countries to cooperate in this sector. Despite this strategic fit, there has been very little in the nature of cooperation, either bilaterally or multi-laterally. Cooperation between the two countries had been mooted as early as 2002 when the India-US Cyber Security Forum was set up in the very first flush of cooperation between the two countries. The Forum saw possibilities for cooperation in the law enforcement sphere, in research and development, in the military sphere, in the technological sphere, and in intelligence sharing. Whilst all these hold good even today, the escalating threats emanating from cyberspace warrant increased and urgent co-operation in this sphere. This can take the form of sharing best practices and coordinating approaches geared towards a common vision of ensuring that cyberspace remains open and free, and at the same time secure.

### **Intelligence Sharing**

Despite the fact that intelligence cooperation between two countries is in deed a sensitive in nature, there is a growing need for intelligence sharing between India and the US as

they share several common goals for the welfare of not only for their citizens, but also for the global welfare. Since the end of cold-war in general and visit of President Clinton to India in 2000 in particular, the relations between the two countries have risen significantly. As on date, India and the US share several common challenges such as threat posed by terrorism and religious extremism; proliferation of the Weapons of Mass Destruction (WMD); and military rise of China. The issue of nuclear security offers both governments' diplomatic, practical and technical ways in pushing forward the nuclear and radiological security agenda. India can also cooperate with the US in counter proliferation measures such as the PSI. Though, India is not a member of the PSI agreement, it made clear that it supports the basic principles of interdiction to control the spread of WMD and their carriers.

This would give the US and India a chance to cooperate and collaborate and exchange information. In a possible future scenario it is very likely the cooperation could predominantly be in sharing technical intelligence like bank transfers, fictitious organisations, terror linkages, Chinese maritime surveillance, sale of high-tech equipment for intelligence, border monitoring equipment, WMD trail, nuclear material information, brain mapping, better technology for accessing information through interrogation and last but not the least sharing of low-level satellite imagery for greater knowledge and information about these issues. The cooperation would also evolve with regarding nano-satellites, high-tech nuclear safeguarding equipment, scenarios for terror attacks and grid network for intelligence sharing. However both the countries have not yet totally exploited the enormous scope of the cooperation despite the natural overlap of strategic interests. The next decade would be a test for both the partners to reach the zenith of the cooperation of which intelligence sharing should be established as a pillar.

## 2. Economics

### Trade and FDI

India-US economic relations are an important element in the overall relationship between the two countries. Almost all economic indices bring out the importance of this aspect of the relationship to the well-being of both countries, something further acknowledged in the Strategic Partnership document of July 18, 2005 where almost all the focus areas, including Economic Growth and Trade Promotion, Energy and the Environment, Democracy and Development, and High-technology and Space were economic-centric or related. While common goals and values are at the core of the relationship between the two countries, the increasing synergies in the economies of the two countries are a catalytic factor. The three pillars of India's global engagement that had been identified by Prime Minister Manmohan Singh recently are “sustaining capital inflows to supplement indigenous investment efforts, the need to take advantage of rapid scientific and technological developments in the world which provide an opportunity for India to leap frog its technological development, and the need to ensure that the country's growth is

not constrained by scarcity of natural resources." A harmonious and growing relationship with the US is a sine qua non to achieve all these three objectives. On the US side greater access to the ever growing Indian market has been a major motivator for engagement with India. Bilateral trade has shown an impressive growth more than tripling over the last decade. In 2009 India for the first time figured in the list of top 15 countries with whom US had major trade links.

In the realm of foreign direct investment (FDI) too there has been substantial two-way growth in recent years. Both US investments in India and Indian investments in US have seen dramatic increases in recent years. With the explosive growth in diffusion of knowledge across international boundaries, with the advances in information technology, both India and the US stand to gain the coming decades with greater integration of their two economies. Although India is projected to become on the world's top three economies in the coming decades and the US will retain its preeminence as a major economy with the high level of per capita GDP for many years to come. The two countries should start preparing now for the future when these two economies will common political and social goals can become one of the major alliances shaping the future evolution of international political and social order.

### **Intellectual Property Rights**

Creativity and its protection have become a common phenomenon in the contemporary terrain of globalization where technological advancement is considered major factor of competitive advantage. In this context Indo-US intellectual Property Rights (IPR) relations that were characterised by antagonism in the past have grown to a stage of cooperation as both countries engage in sensitive technological cooperation to lure benefits of globalization, though some differences still persist in Indo-US IPR relations.

These differences are reflected at various joint Trade Policy forums of both countries. The issues associated with pharmaceutical industry, Geographical Indications and disclosure of the origin of biological materials are certain issues that are entrenched with national interests of two countries. Nevertheless bilateral cooperation on IPR that began in December 2006 has resulted in joint collaborative efforts to such as the one to address biopiracy issues and the one between the Traditional Knowledge Digital Library (TKDL) of the Council of Scientific and Industrial Research (CSIR) and the US Patent and Trademark Office to enable the USPTO to search the extensive database of India's traditional knowledge. The government level cooperation has further spread to private sector participation through U.S-India High Technology Cooperation Group (HTCG) and CEO forum both of which include Indian and US industry along with industry associations. The strength of both the countries in biotechnology with their rich biodiversity should enable both countries to plan joint Research and Development (R&D) programs on an equitable partnership leading to innovations and inventions that will benefit both economies.

## High-technology

Historically dual use high technology commerce between US and India has always posed a problem. It was briefly resolved in 1984 with the signing of MOU (Memorandum of Understanding) between the two countries on such commerce. After the 1998 nuclear tests by India greatly affected such high technology transfers from which it recovered only after the initiation of the NSSP (Next Steps in Strategic Partnership) between the two countries. The 2005 India-US nuclear deal further facilitated such high technology transfers although not fully to the satisfaction of India. In particular the presence of Indian destinations in the Entity List has been a thorn on the Indian side. Studies have shown that the inclusion of these entities in the list does not add much to the ability of US to pursue its national policy of not supporting either unsafeguarded nuclear activities or missile programs. On the other hand they do affect in a negative manner India-US bilateral discussions on other related strategic issues. The entities can be easily removed from the list without affecting the US policy of not supporting WMD programs in India. Since India is not currently a member of any of the four multilateral export control regimes, it is subject to export licensing in a large number of dual use items of significance for civil industry and hence delays in the procurement process. The two countries should, in cooperation with other members of these regimes, explore ways and means through which India can be integrated with the regimes, especially as India is one the few countries with technology encompassing the full range of subjects covered by these regimes and is yet not a member. India has the first step of harmonizing its export control list in line with these regimes. India and US should now seriously explore how to manage future dual use technology trade in a manner that helps global trade without affecting international security.

## 3. Energy and Climate Change

### Nuclear

2005 was a landmark year in India-US relations because of the July 25 Indo-US nuclear deal which was followed by US-India 123 agreement and the subsidiary agreement on reprocessing. India is poised to expand greatly the share of civil nuclear power in its energy mix and the US nuclear industry too is looking forward to taking part in India's future nuclear energy programs. India had, in turn, passed a civil nuclear liability bill although it does some features not found in the nuclear liability bills of other countries. The US industry along with the US government have expressed their anxiety over the Indian bill fearing that it may impose extra ordinary burden on the US industry. However, close examination of the Indian bill does admit of remedial measures that can be done to allay the US industry fears. However, a resolution of the matter to the satisfaction of both sides would require both sides to abandon their current rigid positions. If this is resolved then the way is open for substantial further nuclear cooperation between the two countries in all matters pertaining to civilian nuclear uses in future and in particular cooperating in



nuclear safety and security issues, assisting new entrants to civil nuclear power in managing safely their nuclear programs etc. India with its strong and well flourishing base in nuclear research can join with US in managing future global civil nuclear programs in an imaginative manner which is equitable and non-discriminatory.

### **Renewables**

The pursuit of cooperation between India and the U.S. in the renewable energy (RE) sector comes from the realization of the fact that environmental pressures will continue to rise and are strong enough to merit concrete policy changes with respect to the nature of energy consumption. India and U.S. have a mutual interests that will be fulfilled if they cooperated in the RE sector. This is because India and the U.S. are among the world's highest greenhouse gases emitters. Increased use of RE can reduce environmental pressures on economic growth, and the two need not be irreconcilable. The nature of Indo U.S cooperation in the RE sector can be envisaged to be of two kinds: 1) transfer of technology (TOT) and FDI from U.S. to India; and 2) joint cooperation based on innovation in the area of appliances using RE. Literature available thus far suggests that the Indian government is making necessary policy changes to facilitate transfer of technology and FDI in the RE sector. The international expo which was held in October 2010 suggests this. Therefore Indo U.S. cooperation in the RE sector would essentially be marked by U.S. exports to India. That being said, Joint cooperation in technology development ought to be the goal India must work towards. Given that India is developing its domestic RE sector also, this should not be a difficult task to achieve in the future. But U.S. and foreign funding/investment would initially provide the momentum needed to increase the RE generation. Joint cooperation in technology development may among other things improve the technological base of India as well.

### **Climate change and environmental issues**

While the quest for energy independence animates US energy and climate change policies under the Obama administration, the need to expand energy sources to fund its galloping economic growth is a driving factor in India's own policies on these aspects. He has initiated a series of legislative and executive decisions in order to realize the promises of a green energy future for the US. Imponderables do however remain, including the nature of the administration's political commitment in the face of rising costs in achieving a green future and the non-realization of the potential of alternative energy sources like ethanol.

India's own huge plans to realize energy sufficiency span the entire spectrum of energy sources from coal to nuclear to bio-fuels to renewables. The promise of the Indo-US nuclear deal is close to being fulfilled with a slew of bilateral nuclear agreements that India has entered into after the NSG 'clean waiver' of September 2008. The country's total installed renewable energy capacity as of March 2010 stood at nearly 17,000 MW, a massive leap

from about 5000 MW in 2004. India is currently the fifth biggest producer of wind energy in the world, after Denmark, Germany, Spain, and the USA. Its wind power potential has been estimated at over 45,000 MW. India also launched the National Solar Mission in January 2010 with an aim to generate about 20,000 MW of solar energy by 2022. The country's National Action Plan on Climate Change (NAPCC) released in June 2008 has 8 'missions' to achieve the goal of sustainable development, including developing solar energy, water conservation, energy efficiency, sustainable agriculture, among others.

India and the US therefore can take advantage of each other's priorities and seek a better future for their peoples, while at the same time being sensitive to their respective compulsions and goals. For instance, New Delhi will have to convince Washington that its energy relations can be a form of 'positive clout' with countries like Myanmar or Iran which can be channeled to bring about a change in their foreign policy positions for the greater regional good. A 'clean and green' future is in their mutual interests, and the consequences of not being able to achieve such a future are stark, especially so for a developing country like India.

## 4. Social and Community Development

### Education

Education sector is of critical importance because the challenges of poverty, food security, public health, human resource development and women empowerment can be successfully met if citizens attain high quality of education. It is imperative and significant for large democratic nations such as India and United States that its citizens attain high quality of education so that they can participate in the democratic process and nation building responsibly and successfully.

In this regard, India-US Cooperation in education sector is very significant. Given that India is the second most populous nation in the world and its 50 per cent population belongs to youth below 25 years age, imparting quality education is an area of utmost importance for the Indian nation. To nurture a responsible and enlightened citizenry, these young people will have to be imparted with quality education other than fulfilling their basic necessities. In this regards, India-US cooperation in the education sector could be very significant. It would be significant to highlight that India-US cooperation is getting stronger in the education sector as already more than 100,000 Indian students are enrolled in various educational institutions in the United States. India is on the top position in terms of place of origin for international students in the United States.

However, realising the importance of cooperation in education sector, the two governments have decided to form an India-U.S Higher Education Forum under the auspices of the U.S.-India Business Council apart from taking several other initiatives. To promote greater educational collaboration, Foreign Education Service Providers Bill has been introduced



in Indian parliament. The Nehru-Fulbright Fellowship Programme and the Singh-Obama Knowledge Initiative are providing momentum to the educational exchange programme between the two countries. The India-U.S Science and Technology Endowment is also set to play an important role in promoting research collaboration and academic exchanges.

However, there should be an exploration for even deeper collaboration and understanding in the education sector between India and the United States. More creative initiatives need to be taken by both the sides.

## Health

Health sector is one of the significant areas of critical importance where there could be deeper collaboration between India and the United States. Considering the importance of cooperation in the health sector, both the nations have set up science and technology, health and innovation working groups aimed at exploring new areas of cooperation in leading technologies as well as addressing global health challenges.

This has resulted in the setting up of a joint \$30 million science and technology endowment aimed at innovation through joint US-India science and technology projects. Additionally the governments have decided to establish a seventh Regional Global Disease Detection Center in India which will be a part of the Disease Detection (GDD) network. The other six regional centers are situated in Kenya, Thailand, Guatemala, Egypt, China, and Kazakhstan.

This network will engage in a wide range of activities such as emerging disease detection and response, laboratory systems and biosafety, pandemic influenza preparedness and response, health communications, zoonotic disease investigation and control as well as field epidemiology training.

The India United States Health Dialogue launched in late 2009 has already resulted setting up of four working groups to advance cooperation and establish common goals between India and the United States in health sector. India had suggested including mental health in the working group on non-communicable diseases.

The United States has continuously supported India's polio eradication programmes. The United States Centers for Disease Control and Prevention (CDC) has provided over \$111 million to India for polio eradication since 1999. The contributions made by United States Agency for International Development (USAID) in the health sector in India are significant. It has launched Health of the Urban Poor Program which is directed at improving reproductive and child health in urban poor slum areas. Similarly, Gates Foundation is also engaged in promoting health cooperation between India and the United States and has made substantial investment in health-related activities in India, especially HIV-AIDS prevention and maternal and newborn health.

## Gender/women empowerment

Notwithstanding the acute difference in the statistics of gender empowerment between the India and the US, there is possibility that the next ten years could see considerable degree of cooperation between India and US, both at the governmental and the non governmental level. On the institutional side, Women's Empowerment Dialogue between the US and India is set to proceed as part of the Education and Development Pillar one of five broad pillars that provide the edifice for the India-US Strategic Dialogue. The US has proposed creation of a Women's Empowerment Fund to support the India-US Women Empowerment Dialogue objectives. With the evolving role of women on India's social, economic and political landscape, gender co-operation may correspondingly be expected to change in extent and character. One of three pillars of the USAID's current mission in India, co-operation on clean energy through involvement of women as the nodal point at the household level by far remains some way from maximizing its potential. Recent talks on gender co-operation as part of the Indo-US Strategic Dialogue have identified enhancing the profile of women in the region, that of Afghan women in particular, as a common goal for both nations. The two countries working jointly can further the role of gender co-operation in securing a peaceful, prosperous and progressive region.

## 5. Diplomacy and Global Cooperation

### Multilateral institutions

While India and the United States have previously not worked in close tandem in multilateral institutions, gradually, the two are finding common ground. This is leading to a new era in their relationship. The two countries are sinking their political differences, and the convergence is getting reflected in multilateral institutions. By 2020, drivers such as the rising Indian profile, globalization, the new threats, new global challenges and the willingness of India to participate in global affairs may force both the countries to search a new and meaningful relationship in international institutions. The world may witness a reformed UNSC, a more active UN and new political configuration in multilateral institutions. The new political institutions or bodies or groupings reflecting the emerging power dynamics would be more important than the ones resisting changes. The economic institutions would become ideologically more comfortable place for both the countries for future activities. Both the countries are already developing harmonious relationship in most of the specialized organizations. With the convergence of strategic and security perceptions the two countries should work together in both new and old organizations.

### Democracy

India's recently embraced democracy as one of the important foreign policy priorities. Until recently India's explicit role in democracy promotion worldwide or in its immediate neighbourhood has been reluctant and ad-hoc. The July 18, 2005 joint statement by Indian

Prime Minister Manmohan Singh and then U.S. President George W. Bush in the landmark Indo-U.S. civilian nuclear agreement recognized democracy as a guiding principle for building a peaceful, prosperous, inclusive and sustainable world. The United States India democracy cooperation therefore created the overarching edifice for stronger cooperation in several prioritized areas. Some of the drivers that would influence India-United States relationship in the promotion of democracy are: Shared need for a stable South-Asian region, the imperative of quality economic growth through quality democratic institutions, the need to promote human rights through democratic development, Energy security, addressing the problems of climate change and other non-traditional security. United States India cooperation in promoting the values of peaceful democratic coexistence, prioritizing democracy for economic growth, strengthening the role of civil-society in the Asian region by promoting and protecting human rights and democratic reform, ensuring an order of environment protection, ecological and balanced livelihood governance, partnership in post-conflict reparations of democratic institutions and promoting multilateralism and liberal norms and values would create a norm of good governance in the international milieu. Democratic institutions would not only enable stronger partnership between both the nations but could also withstand the pressures of changing domestic and international political dynamics.

### **Soft power and Diaspora**

The Indian diaspora in the United States is widely considered to be one of the most significant motivators of improved India-U.S. relations. Going forward, the impact of the Diaspora is only set to increase provided the current environment continues to hold good. A positive environment would encompass friendly relations between the two countries based on common goals and common values, and continued synergies between the two economies leading to increased people flows spanning generations. At the present point in time, Indian Americans number 2.5 million. The fact that most Indian immigrants are highly educated has smoothed the way for entry, assimilation and integration into American society. Their professional background has made them an asset not just to their adopted country, but also their country of origin. Barring unforeseen circumstances, the existing trend of greater Indian diaspora involvement in US public administration and private industry will greatly benefit both the countries understanding each other better leading to all round advancement of bilateral relations. It will also enable both the economies to better leverage their comparative advantages through scaled up people-flows in both directions and across the spectrum from student flows to professional workers, to businesses. The leaderships in both the countries seem to be aware of these potentials. In the message that Obama conveyed to the Indian people on the occasion of India's Republic Day he called on Indians and Americans to work together to "offer benefit to all the world's citizens as our scientists solve environmental challenges together, our doctors discover new medicines, our engineers advance our societies, [and] our entrepreneurs generate prosperity..." In a similar vein, Prime Minister Manmohan Singh,

while speaking before an audience of Indian Americans on the last day of his US visit in 2009, spoke of how “modern technology and flexible policies” have opened possibilities to work seamlessly around the world. The two governments must seriously consider ways to translate these words into action.

### **Pakistan**

There are multiple forces which define India US relations when seen through the prism of Pakistan. Potential drivers determining the semantics of the tripartite comprising India United States and Pakistan may be categorized broadly as US posture on Pakistan's cross border militancy in India, Nuclear dynamics in south Asia and US role, Afghanistan/ War on terror ,US aid to Pakistan (military & non military) and nature of government in Pakistan.

Of utmost significance is the course of US aid in Pakistan. More aid to Pakistan is being promised without deriving methods aimed at appropriate use of the aid money. US administration has shown intentions to bring about a change in its aid policy towards Pakistan. Ironically, these intentions have been far from being translated into policy statements.

US has been conducting a series of Strategic Dialogue with India and Pakistan including China. With Pakistan, the strategic dialogue was first of its kind and therefore generated a great deal of media interest and high hopes. The dialogue however concluded without arriving at concrete frameworks and ideas on how to deal with militancy in Pakistan which would affect the overall ties between US and Pakistan.

As far as the strategic dialogue with India is concerned, more than anything else the two countries touched upon vital issues which technically fall outside the ambit of strategic partnership for example Women Empowerment Dialogue which is discussed in the earlier section. This shows India and United States have reached a level from where they could think of diversifying areas of cooperation and convergence of interests despite irritants in form of the Pakistan factor.

### **Afghanistan**

The United States and its NATO allies are engaged in the Afghan war which has entered its 10th year on October 8, 2010. India has vital stakes in the stability of Afghanistan. India has had pro-active engagement in the reconstruction of Afghanistan. So far India has invested more than US\$ 1.3 billion in many projects such as construction of road networks, power transmission, schools, healthcare units, telecommunications development, power transmission, building vital infrastructure including construction of the new Afghan parliament etc. There has been a wide appreciation in India for the United States and its NATO allies for their vigorous fight against the Taliban and Al-

Qaida since these terrorist groups pose most serious security threats not only for this region but the for the whole international community and also instability in Afghanistan has implications for India. Similarly, India has been playing its constructive role in the form of economic aid and reconstruction of Afghanistan aimed at boosting up the efforts of the United States and its NATO allies so that stability can be brought about in Afghanistan. India has had ancient civilisational as well as cultural linkages with Afghanistan and India's efforts for peace, stability and developments as well as its liberal values enjoy enormous goodwill and appreciation in the societies and peoples of Afghanistan.

Because of these deep historical linkages, India has been able to perform its role in construction and developments successfully despite facing severe threats and security challenges posed by Taliban as well as other agencies based outside Afghanistan. There are indications that the United States has recognised India's role in any solution of Afghan crisis. Given that Obama's administration has plans to start drawdown of its forces from Afghanistan from July 2011, it may be suggested that this mutual recognition for each other's efforts for peace, stability and development in Afghanistan should be clearly noted and stated by both, India and the United States. More significantly, the United States must engage India more deeply in the deliberations on any future strategy for the solution of Afghan crisis.

## Iran

India and the US have some of their most vital concerns in West Asia/Middle East. For India, the region is home to nearly 5 million of its population who also send in large remittances. India imports a vital share of its energy requirements from the region. The US on its part is involved militarily in the region in Iraq and Afghanistan and it has spent more than a trillion dollars in these countries. Though President Obama has stated that American troops will begin to be reduced from July 2011 in Afghanistan (and most combat troops have left Iraq), many US officials have publicly stated that Washington will continue to be robustly engaged even beyond July 2011. Even on Iraq for instance, Secretary of Defence Robert Gates told the Senate Foreign Relations Committee on September 26, 2007 that he foresaw a "long-term presence" of about five US combat brigades (20,000 troops) in that country. The nature of US interaction with the Iranian regime sharing borders with both Iraq and Afghanistan will also be of utmost importance. Given the intractable nature of its military commitments in the region, coupled with continuing imponderables associated with the Iranian nuclear programme, India and the US have a cautious path to tread. A further deterioration in the security environment in the region will negatively affect India's security interests. The renewed sanctions regime in place since June 2010 has resulted in long-standing Indian companies being blacklisted. A further tightening of sanctions will further negatively affect India's commercial interests as well as vitiate the situation for the vast majority of the Iranian population. The US should be encouraged to

persist with and stick to the diplomatic path in finding a solution to the Iranian nuclear question while the world community should continue to impress upon the Iranians the dangerous consequences of a possible nuclear weapons pursuit. Iran on its part should more effectively answer the queries of the International Atomic Energy Agency (IAEA) and gain the confidence of the world on its nuclear pursuits. In the broader region, India and the US should try to find common ground on assisting the parties to the conflict on the Israel-Palestine issue close their respective divergences sooner than later. India has positive vibes with both sides to the conflict, which can be usefully brought to bear either unilaterally or in concert with other like-minded parties.

## 6. Non-Proliferation and Disarmament

### Reforms in the non-proliferation regime/NPT/CTBT/FMCT

The non-proliferation regime and its cornerstone, the NPT, has for long been in stress, unable to cope up with emergent proliferation challenges non-compliance and threat from non-state actors being the most formidable. While structural reforms to strengthen the regime are imminent, such processes could be fruitless without re-tailoring the NPT to meet 21st century requirements and reinstating its position as a means to facilitate a post-proliferation world. There are other reforms imperatives including strengthening safeguards and building firewalls against non-state actors accessing nuclear technology. Similarly, the reform process will need to consider the proliferation risks that are inherent in the impending nuclear renaissance. The ongoing reform efforts are, but, disparate at multilateral levels with Washington as the lead initiator. While President Bush overlooked the NPT in his efforts to strengthen the regime, President Obama prefers a revival of the NPT-centric system and adjunct mechanisms for test ban and ending fissile materials production as calibrated steps towards total abolition. As a beneficiary of the non-proliferation bargain expounded by President Bush, India is committed to play a major role in global non-proliferation efforts. Reforms are of interest to India, especially if it rectifies what India perceives to be a discriminatory nuclear order, perpetuated by the NPT system. Though India now prefers a stand-alone mechanism to pursue disarmament, it will like to accede to the NPT if it restructures in a manner which recognises its nuclear weapons. India is also committed to the FMCT, but resists the CTBT in its present form with the argument that it does not add to the disarmament process. While keen to integrate with the regime, India is apprehensive of being at the receiving end of any denial regimes which will be perpetuated by the reforms process. From multilateral fuel cycle initiatives to restrictions on ENR technologies, India feels the pressure of being an end-user state and could hence seek to elevate its status in the regime. Forcing accession to the NPT as a non-weapon state and pressure to sign the CTBT are things which New Delhi could expectantly resist.

### Disarmament

India has long advocated for a nuclear weapons free world and the United States under President Obama appears to echo a similar viewpoint. As nuclear weapon states (NWS), both share that threat posed by non-state actors and terrorists in the use of nuclear/



radiological weapons. While the current US efforts are centred in arms reduction through the START treaty, there are no indications from other NWS on reducing their nuclear weapons stocks. In fact, China and Pakistan are known to be modernizing their nuclear weapons aggressively. The idea of a nuclear weapons convention to achieve the objective of a world free of nuclear weapons has support from member states of the UN, but does not appear to have made any significant beginning. The work on bringing into force of the other two major treaties namely the CTBT and FMCT have met dead-end. In these circumstances, while trying to achieve the ultimate goal of complete nuclear disarmament, the US and India will have to encourage the settlement of Iranian and North Korean nuclear issues, negotiations on a global treaty banning the no-first-use of nuclear weapons, urge US and Russia to undertake further reductions under 'Renewed START' to below 500-1000 warheads by 2025 etc.

### **Reforms in the Nuclear Suppliers Group**

The Nuclear Supplier Group aims to either pre-empt or prevent the non-proliferation by both supplier as well as recipient states through its guidelines. Nevertheless, NSG is confronting various organizational challenges that threaten its long term survival and relevance. The NSG's expanding membership and the absence of consensus on various issues like ENR exports, non-members adherence to NSG guidelines, and violations by member states are some of the issues that NSG will have to address in the near future. How NSG deals with these problems would not only shape its relevance but will also have profound implication on the emerging nuclear order. There are concerns with making the Additional Protocol a new condition of supply in the face of opposition from few member states. India has effectively implemented the Additional Protocol and both, the U.S. and India can jointly work together to persuade the supplier states and other recipient states for mandatory implementation of the Additional Protocol. India with its vast scientific resources can jointly work with U.S. in developing the nuclear database necessary for nuclear forensics. In addition to universalising the NSG guidelines, India and U.S. can jointly work together in various international fora to advance the cause of non-proliferation and both the countries can explore how India can be officially brought into the fold of NSG.

### **Counter proliferation (PSI, Missile Defence)**

Being in a proliferation-ridden neighbourhood, India endorses the significance of counter proliferation initiatives, but is averse to the reliance on military interdiction and pre-emption. New Delhi is open to the idea of cooperating on a case-by-case basis with various initiatives but refusing to commit full-fledged owing to political sensitivities. At the heart is the need to address divergent perceptions. Besides the fact the counter proliferation as defined by Washington is not reconciled by New Delhi, the concept as such does not figure in India's strategic thinking. India sees missile defence as a defensive-deterrence mechanism while Washington perceives it as active defence mechanism against missile

proliferation. Similarly, despite making template interdictions, India sees the PSI as pre-emption tool targeting US adversaries, which India disapproves. Even on nuclear terrorism, India could find partnerships ineffective unless the source of proliferation and terror (read Pakistan) is adequately addressed. The first step towards cooperation only could begin when India devises its counterproliferation strategy and framework. This is imminent considering India's committed role in global non-proliferation, besides its need to tackle proliferation in its neighbourhood, especially the Indian Ocean Region. India could use the technological assistance on BMD development to correct an instable nuclear equation with Pakistan, whose ambiguous nuclear postures has often negated India's deterrence. India's will also need to prepare for challenges from the impending nuclear energy renaissance. From proliferation-resistant recycling technologies to multilateral fuel-cycle initiatives, a whole gamut of denial mechanisms will confront India as an end-user. To insulate itself, India needs to rapidly mature as a supplier state and carve itself a leadership role in the emergent regime, rather than being at the receiving end. Finally, three scenarios could be envisaged on the likely potential for India-US counter proliferation cooperation. The most probable one be a restrained or controlled partnership on case-to-case basis, depending on the political imperatives. A second possible scenario is a proactive engagement leading to a grand anti-proliferation alliance, largely prompted by a new dispensation. A third, and potentially wild card scenario, could be one of confrontation where an aggressive non-proliferation push by President Obama could endanger the strategic partnership, potentially initiate further nuclear exceptionalism from India, leading to the termination of the nuclear deal. All scenarios could involve events and drivers which have low to high probability of occurrence.

### **Nuclear security and WMD terrorism**

The probability of non-state actors acquiring and using weapons of mass destruction against vulnerable non-combatants have remained a worrisome threat since the turn of the century. The watershed event of the bombing of the Twin Towers in New York on September 9, 2001 has significantly raised the concerns regarding WMD and their probable usage. However, it is just not enough to have heightened concerns about the threat of a probable CBRN attack by violent non-state actors. In qualitative terms, heightened concerns of a probable WMD threat is not the same as dealing with an actual increase in a threat and understanding the reasons for it. An attempt has been made in this essay to develop a comprehensive understanding of the correlation between non-state actors and weapons of mass destruction. What factors drive violent terrorist groups like the Al Qaida to seek the most fearsome weapons? The study emphasizes on the need to produce improved understanding of the motivations, vulnerabilities, capabilities and context for actual attacks, not mere expressions of interest in WMD. Further, an attempt has been made to analyse certain variables that provides a deeper understanding of violent terrorist groups' preference for WMD.

**CHAIR**

**THOMAS MATHEW**

**CONTRIBUTORS**

**G. Balachandran**

**Rajiv Nayan**

**CH. Viyyanna Sastry**

**Alok R. Mukhopadhyay**

**A. Vinod Kumar**

**Cherian Samuel**

**Pankaj Jha**

**Reshmi Kazi**

**Salvin Paul**

**S. Samuel C. Rajiv**

**Priyanka Singh**

**Sanjeev Kumar Shrivastav**

**Prashant Hosur**

**Shanmugasundaram Sasikumar**

**Kalyani Unkule**

**Saba Joshi**