Chapter 3

India's Nuclear Policy: Impact on Asian Strategic Environment

Is India on a rise that will have a major influence on the Asian strategic environment? This question has been asked repeatedly since the 1980s. India, the world's largest democracy with a population of 1 billion people, had been regarded by Japan and the United States as merely a major power in "South Asia" with a marginal influence on Asia as a whole. During the 1990s, however, two fundamental changes occurred within India that have pushed its status to a global power.

The first was the success of the economic liberalization initiated in 1991. The GDP growth rate from fiscal year 1994 to fiscal year 2000 averaged 6.7 percent. Foreign exchange reserves exceeded $40 billion at the end of August 2001, with investment in the stock market and an influx of direct equity investment. The software sector, which India focused on as a means to catch up with the high rate of Asian growth, is strong and has grown into an export sector with an annual profit of $4 billion.

The second was the change in India's perception of the world and the concomitant change in its strategy. The nuclear tests conducted in 1998 most clearly demonstrate such change. Although the tests were a terrible blow to the establishment of the nuclear nonproliferation framework, they produced a side effect of making the relationship between the United States and India closer. Reciprocal visits by leaders from the United States and India, as well as the resumption of military cooperation, are testament to such developments. In order not to fall behind the United States, Japan invited the Indian prime minister, Atal Behari Vajpayee, to Tokyo in December 2001.

Defense exchanges between Japan and India have recently been initiated. It is necessary to evaluate India's nuclear policy from the perspective not only of nuclear nonproliferation but of nuclear strategy. Focusing on its nuclear doctrine, this chapter explores India's perception on the strategic environment, including that of China, and the level of nuclear capability that India aims to achieve. The concluding section analyzes India's strategic role in East Asia.

1. India's Perception of Strategic Environment

(1) Nuclear Nonproliferation Regime and India

Why did India need to conduct nuclear tests? Posing this question today, four years after the tests, it is possible to see convergence among the answers of the Indian strategic community – the Indian government, former high-level government officials and think-tank researchers. The consensus on two major issues, reached only after the tests, exactly reflects the present Indian strategic view. One issue is nuclear nonproliferation. India feels it had been under pressure from the international nuclear nonproliferation regime. The other is the regional strategic environment. India asserted that nuclear proliferation from China to Pakistan was contributing significantly to the deterioration of India's strategic environment.

As to the first issue, the reason that strengthening the nuclear nonproliferation regime may be detrimental to Indian security interests is because of the "option policy" that had been in place since China's first nuclear test in 1964. The essence of the option policy was that India would not hold nuclear weapons at the present moment, but that nuclear capabilities were retained and the possibility was left open for future weaponization. This policy was not based on clear strategic evaluation but was a cumulative result of successive governments' avoidance of making decisions on weaponization. The domestic political circles have been torn in two since China's nuclear test, with one side advocating that India should go nuclear and the other advocating that India should stake out a moral superiority in the international community by promoting nuclear disarmament. In 1974, the leaders of the then ruling Congress Party carried out nuclear tests under the name of "peaceful nuclear explosions." While renouncing the development of nuclear weapons, it effectively synthesized nuclear scientists' assertions for a nuclear weapons program on the one hand and India's tradition of nonviolence on the other.

The option policy was also a result of compromise between the po-

litical elites and the technocrats. They had the common interest that the army should not be involved in nuclear policy making. Scientists belonging to the Department of Atomic Energy and Defence Research and Development Organization had taken charge of nuclear development while the armed forces had been excluded from the process. It was because the option policy did not require detailed consideration of use of nuclear weapons.

The option policy has not been formulated as a deterrent strategy. Still, looking back on the position of the government toward the Nuclear Nonproliferation Treaty (NPT), it is obvious that India was conscious of China's nuclear possession. Prior to making a decision on the treaty in 1967, L.K. Jha, the prime minister's secretary, proposed that a U.S.-Soviet guarantee against nuclear attack on non-nuclear countries be given. During talks with Robert McNamara, the U.S. secretary of defense, he also cited two obstacles to India signing the NPT: the security problem vis-à-vis China and the curtailment of Indian nuclear technology. The Cabinet meeting, where the final decision was made not to sign the NPT, was divided into two lines of argument. One was for the retention of a nuclear option to counter China and the other strongly opposed the development of nuclear weapons. However, even the latter group rejected the treaty due to its unequal nature.

Externally, India hardly ever referred to its own security problem at the Conference on Disarmament in Geneva. Instead, India repeated its call to redress the "discriminative" provisions applied only to non-nuclear-weapon states and argued for the right of peaceful use of nuclear energy, including peaceful nuclear explosions. For 30 years after the conference, India managed to strike a balance between nuclear disarmament and the option policy.

This came to an end in 1995, when the NPT was indefinitely extended and negotiations for a Comprehensive Nuclear Test Ban Treaty (CTBT) entered the final stage. A significant question was raised in Indian strategic circles: "Is the option policy credible at all?" For proponents of a nuclear development program, it seemed impossible to

produce nuclear weapons based solely on data from the 1974 nuclear test. Later, in January 1996, a concerned group, including K. Subrahmanyam, who would later play a central role in drawing up the nuclear doctrine, maintained that the credibility of nuclear deterrence must be enhanced by carrying out nuclear testing before the CTBT came into force. Those who valued disarmament negotiations believed that India would not be able to win confidence from the international community unless it agreed to discard its nuclear weapons once the CTBT became effective. Heated arguments over the advisability of adherence to the treaty arose, developing into the question of whether to abandon the option policy and if any affordable security policy existed as an alternative.

During the general election to Lok Sabha House held in April and May 1996, every political party touched on nuclear policy in their policy statements. The election was a three-horse race among the Congress Party, the Bharatiya Janata Party (BJP) and the National Front-Left Front. The BJP was the strongest advocate of weaponization. The Congress Party argued that the option policy must be reviewed if Pakistan developed nuclear weapons. Janata Dal, the core party of the National Front-Left Front, proposed a pledge of no first use against Pakistan. Each of the three does not intend to abandon the option policy. They all concur in opposing the CTBT in its present form.

In June 1996, India finally made it clear that it was withdrawing as a party to the CTBT. Declaring its dissatisfaction with the draft CTBT at the Conference on Disarmament in Geneva, India's representative, Arundhati Ghose, emphasized a security implication to signing the CTBT for the first time. Besides India's conventional argument that the treaty lacked comprehensiveness in that it focused only on horizontal nuclear proliferation, Ghose stated that since countries around India continued their weapons programs, India could not accept any restraints on its capability.

Thus, the CTBT negotiations opened up the security debate on a nuclear option at the government level. The *Annual Report* by the Min-

istry of Defence referred for the first time in its 1996-1997 version to a nuclear option. It stated that, "India stands for total elimination of all nuclear weapons and the ushering in of a nuclear weapon free world. However, till such times as this is achieved," India will be constrained to keep open its nuclear option.

(2) India's Perception of China

The government and the strategic community have reached a consensus that nuclear weapons and missile proliferation from China to Pakistan is the second reason for India conducting nuclear tests. Immediately after the tests, the Vajpayee administration expressed its concerns about China in two regards. One was the sense of mistrust between China and India due to the unresolved border problem; the other was China's clandestine help for Pakistan's nuclear program. To convey the seriousness of these concerns, Prime Minister Vajpayee wrote to then President Bill Clinton of the United States that, "we have an overt nuclear weapons state on our borders, a state which committed armed aggression against India in 1962," obviously hinting at the threat of China without actually specifying the country by name.

However, the remark suggesting a relationship between "the threat of China" and nuclear testing invited criticism at home and abroad. China reacted fiercely to the statement, claiming that India was making a pretext of "threat of China" for the test. The opposition Congress Party criticized the government for antagonizing China, since the Congress highly appraised the improved relations with China, which, it claimed, stemmed from its achievement during the eras of Rajv Gandhi and Narasimha Rao.

These criticisms mitigated the official "threat from China" narrative and the focus shifted to China's nuclear and missile proliferation in Pakistan. In the *Evolution of India's Nuclear Policy*, which Prime Minister Vajpayee submitted to the Indian Parliament on May 27, two weeks after the nuclear tests, he stated that "the decades of the '80s

Table 3-1. Framework of Confidence Building Measures between China and India

Framework of Confidence Building Measures

● Confidence building on the Sino-Indian Border

Joint Working Group (1989-)
- Foreign Secretary level
- Annual meetings held in Beijing and New Delhi

Flag Meetings (1992-)
- Local commander level
- Biennial meetings in Western, Central and Eastern sectors

Military and Diplomatic Expert Group (1994-)
- At the level of the External Affairs Ministry
- Providing support and advice for the joint task force

● Dialogue on security issues

Security Dialogue (2000-)
- At the level of deputy secretary in the External Affairs Ministry
- Annual meetings held in Beijing and New Delhi

Personnel Exchanges

● Mutual visits by Chinese and Indian top leaders (1988-1998)

Dec. 1988	Indian Prime Minister Rajiv Ghandhi visits China.
Dec. 1991	Chinese Premier Li Peng visits India.
Sept. 1993	Indian Prime Minister Narasimha Rao visits China. "Agreement on the Maintenance of Peace and Tranquility along the Line of Actual Control" comes into effect.
Dec. 1996	Chinese President Jiang Zemin visits India. "Agreement on Confidence Building Measures in the Military Field along the Line of Actual Control" comes into effect.

● Mutual visits by Chinese and Indian high officials after the Indian nuclear tests (May 1998)

June 1999	Indian External Affairs Minister Jaswant Shingh visits China.
May-June 2000	Indian President K.R. Narayanan visits China.
July 2000	Chinese Foreign Minister Tang Jiaxuan visits India.
Jan. 2001	Chinese National People's Congress Standing Committee Chairman Li Peng visits India.
May 2001	Chinese Communist Party Politburo Standing Committee member Wei Jianxing visits India.

Sources: Compiled on the basis of the data drawn from Sidhu, Waheguru Pal Singh and Jing-dong Yuan, "Resolving the Sino-Indian Border Dispute: Building Confidence through Cooperative Monitoring," *Asian Survey*, Vol.41 No.2 (March/April 2001), *The Hindu* various issues, *Tonan Ajia Geppo* [Southeast Asian Monthly], and other references.

and '90s witnessed the gradual deterioration of our security environment as a result of nuclear and missile proliferation. In our neighborhood, nuclear weapons increased and more sophisticated delivery systems were inducted. Further, in our region there has come into existence a pattern of the clandestine acquisition of nuclear materials, mis-

siles and related technologies."

The initial rigorous words on China uttered by Vajpayee and some other Cabinet members were unusual. However, their perception of China was not totally unshared by the broader official circle. The China factor can be traced back at least to the 1985 publication of the Ministry of Defence's *Annual Report*. First, regarding the India-China border issue, except in 1986, when an armed conflict broke out, the phrase "improved relations" was repeatedly mentioned, used in conjunction with different adjectives, such as "positive" and "significant." However, referring to unresolved border problems, a number of issues repeatedly noted "the improved strategic situation of the Chinese Army in Tibet," and especially the "upgrade of China's logistic capabilities along the India-China border." Military balance between India and China on the border is of utmost concern to India. The modernization of China's armed forces has been closely watched as the factor defining the balance. Every report, though briefly, states China's military development, including descriptions of China's military technologies based on its induction of advanced military technology through the establishment of joint ventures with the West and Russia, as well as the procurement of fighter planes from Russia. After India and China concluded two confidence building agreements, the Agreement on the Maintenance of Peace and Tranquility along the Line of Actual Control, in 1993, and the Agreement on Confidence Building Measures in the Military Field Along the Line of Actual Control, in 1996, evaluation of military balance on the border has been toned down. Still, Chinese military modernization is not just a general concern but is a critical factor for India to maintain balance at the border.

Second, regarding military cooperation between China and Pakistan, the Ministry of Defence referred to the possibility of clandestine assistance by China in the development of Pakistan's nuclear program as early as the 1985 *Annual Report*. In later issues, the fields of assistance stretching to missiles, tanks and fighter jets have been mentioned. A point to note is that the remarks on China-Pakistan military

cooperation, which were in the Pakistan section of the report, were later shifted to a section on China. The shift occurred in the 1995 report, which highly evaluates the confidence building measures (CBM) between India and China. India's concerns about China's military cooperation with other countries are not confined exclusively to Pakistan. India is also suspicious of China's military cooperation with Saudi Arabia as well as with Myanmar.

Third, China specialists in India, which is a rather small group, commonly hold that China has adopted a policy of containing India, at least in the past. Deep-rooted opinion remains among the researchers from the military that China is still continuing this policy.

In summary, defense officials and the strategic community have widely perceived that China is a potential threat to India. Though some political leaders, especially members of the Congress Party and the Communist Party, refuse to point to China as a threat, consensus is emerging in India to refer to "proliferation from China to Pakistan" as a source of concern.

2. India's Nuclear Doctrine

(1) Debate on Nuclear Strategy

In August 1999, India published the "Draft Nuclear Doctrine," which was drawn up by the National Security Advisory Board, a component of the National Security Council. It has not been approved as a government document. Initially supposed to be approved by the prime minister after being adopted by the National Security Council, however, the doctrine is the best compromise among divergent views in India.

The reason this doctrine remained as a draft was the criticism that it encountered at home and abroad. Pakistan claimed that India's nuclear policy would fuel an arms race. The U.S. State Department expressed its disappointment with the draft doctrine, stating that it was a move "in the wrong direction." Western countries tightened their guard, since

India's nuclear policy appeared to be too ambitious in the sense that an upper limit of nuclear capability was not clearly delineated. Moreover, a reference to nuclear triad was made. Domestically, the timing of the publication raised suspicion. Since Parliament was dismissed at that point, the motive of releasing the draft was suspected to be for winning more votes in the subsequent election.

The Draft Nuclear Doctrine is a six-page document consisting of eight sections: (1) Preamble; (2) Objectives; (3) Nuclear Forces; (4) Credibility and Survivability; (5) Command and Control; (6) Security and Safety; (7) Research and Development; and (8) Disarmament and Arms Control. As Indian doctrine was prescribed before developing a nuclear arsenal, unlike the nuclear-weapon states, the draft doctrine carefully stipulates "minimum" nuclear deterrence so as not to hinder research and development efforts. Minister of External Affairs Jaswant Singh also clearly stated that "India has declared a moratorium on undertaking any further underground nuclear test explosions, but research and development activity, including computer simulation and subcritical tests, will be conducted as necessary."

The core principles of the Draft Nuclear Doctrine are "credible minimum nuclear deterrence" and "no first use." The principle of "credible minimum nuclear deterrence" is based on a policy of "retaliation only." While emphasizing the survivability of nuclear weapons, the draft doctrine does not refer to a concrete force size. It stipulates that the aim of India possessing nuclear weapons is "to deter the use and threat of use of nuclear weapons" and declares that "India will not be the first to initiate a nuclear strike." The ambiguity on the level of minimum deterrence invited various interpretations and arguments. In the official view, minimum nuclear deterrence is a dynamic concept defined by the strategic environment and cannot be presented in terms of fixed numbers. The view also emphasizes that India is not pursuing parity in numbers with China.

What level of deterrence should India aim for? Great divergence of opinions exists on the question within the Indian strategic commu-

nity. The most moderate is the argument for "recessed deterrence" and the most radical is that for "maximum deterrence," which regards U.S.-Soviet-type deterrence as ideal. Between these positions, a middle group exists that aims to establish deterrence while taking into account financial and technological constraints as well as the response of the international community. The Draft Nuclear Doctrine is an amalgamation of these three positions. Actual deployment of nuclear weapons in the future will be decided in line with the problems analyzed later.

Following are the main issues that divide the three schools of thought. The first point is the nature of threats. Those who advocate "recessed deterrence" regard Pakistan as the primary threat. Those who advocate "maximum deterrence" do not specify Pakistan as a threat that requires particular nuclear planning for. To them, the main threat is China. They also believe that deterrence against the United States as well as Russia is essential to secure autonomy in strategic decision making. The middle group considers China as the primary threat and Pakistan as a secondary one.

The second point is the force size necessary for deterrence. The middle group suggests figures from 60 to 140. They estimate that the chance of a bomb reaching the target would be 60 percent in a case where India dropped two bombs in each of 10 cities in China and five in Pakistan. However, these figures are also derived from manufacturing capability for the *Pokhran*-I-type bomb (20 KT-class). The process of establishing deterrence from the stockpile of plutonium reflects the pragmatic approach of the middle group. On the other hand, those who advocate "maximum deterrence" suggest numbers from 300 to 400. This is based on the belief that four bombs each would be necessary to destroy 60 targets with certainty and another 50 mostly thermonuclear weapons of various yield-to-weight ratios on top of that would fall far short of robust deterrence. Figures such as 300 to 400 are for "notional parity" with China. Indian researchers estimate that China has a stockpile of 350 to 450 nuclear warheads.

The third point concerns "no first use." Those who advocate "recessed deterrence" evaluate "no first use" as one of the effective CBM. The middle group believes that a guarantee of "no first use" is essential to show that India's nuclear weapons are exclusively for self-defense. They propose that India should clearly show that "no first use" is not just a political declaration but a posture in which nuclear warheads shall not be mated with delivery systems. Those who advocate "maximum deterrence" question the strategic rationale of "no first use," assuming that India's promise of "no first use" would not effectively change the other party's aggressive intention. They are suspicious of whether China's declaration of "no first use" will be applied to India. They cite an argument in China that "no first use" shall not be applied to Chinese territories," although this argument was raised in the context of conventional Soviet invasions in the 1980s. They therefore figure that there is a possibility of first use by China against the northeast region of India over which China claims territorial rights. Furthermore, some Indian analysts take the view that the Chinese principle of "no first use" is only applicable to nonnuclear powers.

The fourth point is about nuclear-force structure. The Draft Nuclear Doctrine has designated a "triad of aircraft, mobile land-based missiles and sea-based assets." While admitting that sea-based assets are ideal from the perspective of survivability, the middle group regards the establishment of sea-based assets as a long-term objective, something more for the future than now. They put priority on the *Agni*-II intermediate-range ballistic missile, which requires further development, mobility, dispersion and deception. Those who advocate "maximum deterrence" argue that the development of intercontinental ballistic missiles (ICBM), submarine-launched ballistic missiles (SLBM) and cruise missiles (SLCM) should be promptly advanced. This debate, however, reflects the different services of the military. For example, retired naval officers advocate sea-based missiles while those of the air force emphasize an airborne system. Tactical nuclear weapons are considered unnecessary except to a minority in the "maxi-

mum deterrence" group. The reason for the convergence of all three groups is that the "recessed deterrence" group as well as the middle group do not base their premises on a nuclear war and those in favor of "maximum deterrence" do not assume deterrence vis-à-vis Pakistan, against which tactical use would be most applicable.

The fifth point is about command and control. Since the middle group does not envisage a nuclear war, it considers it sufficient to centralize command and control at the highest level, the prime minister. Those who advocate "maximum deterrence" believe that nuclear weapons should be integrated into the military operation plan and that the authority for the control and use of nuclear weapons needs to be transferred to the armed forces as in the case with U.S.-Soviet nuclear deterrence.

(2) Positions on Nuclear Disarmament and Arms Control

The Draft Nuclear Doctrine has one section on nuclear disarmament and arms control. It states that "verifiable and nondiscriminatory" nuclear disarmament is India's "national security objective." The statement reaffirms that India's traditional policy of pursuing nuclear disarmament while retaining a nuclear option is consistent.

After the May 1998 nuclear tests, Indian scientists announced that, having obtained the necessary data for computer simulation, India had reached a stage where subcritical experiments could be conducted in the future. This sense of self-confidence led India to make a voluntary declaration of a moratorium on nuclear testing while expressing its willingness to negotiate towards joining the CTBT at the 1998 United Nations General Assembly.

On a visit to Lisbon to attend a summit meeting with the European Union in June 2000, Prime Minister Vajpayee promised at the joint news conference that India would endeavor to "reach a domestic consensus" toward signing the CTBT. In fact, throughout the summer and autumn of 2000, there was heated argument on the CTBT in Parliament as well as in the media. Those in favor of signing the CTBT

stressed the importance of rejoining the mainstream of international society in the area of arms control and disarmament. Those against maintained the necessity of additional nuclear testing to add reality to deterrence. The latter group believe that India has yet to acquire the necessary technologies for manufacturing thermonuclear weapons or for subcritical experiments. In his address at the United Nations General Assembly in September, Vajpayee stated that India was pressing forward with a domestic consensus toward adherence to the CTBT and that India would not stand in the way of the entry-into-force of the treaty. In other words, India made the pledge that it would ratify the CTBT if the other 43 of the 44 countries required to ratify would do so.

Besides demonstrating a cooperative stance toward the international community, India is actively proposing its own nuclear arms control agenda. The essence of the Indian proposals are: (1) a convention prohibiting the threat of or actual use of nuclear weapons; (2) an international treaty on "no first use" of nuclear weapons; and (3) a zero-alert status for all nuclear weapons. What India means by a "zero-alert status" is to keep the warheads and the delivery vehicles separately, with scientists controlling the warheads and the armed forces manning the delivery vehicles. India believes that this would prevent the break out of nuclear wars from accidents or mistakes. India has also proposed a Resolution on Reducing Nuclear Dangers at the United Nations.

3. Challenges Ahead in Practicing Nuclear Doctrine

(1) Deterrence vis-à-vis China

"Minimum nuclear deterrence," as is previously mentioned, cannot be a perfect guide for the future of the nuclear weapons program. The biggest challenge that India might face would be how to develop a stable deterrence vis-à-vis China. Two questions are at hand. First, what kind of weapons should be developed and deployed? Second,

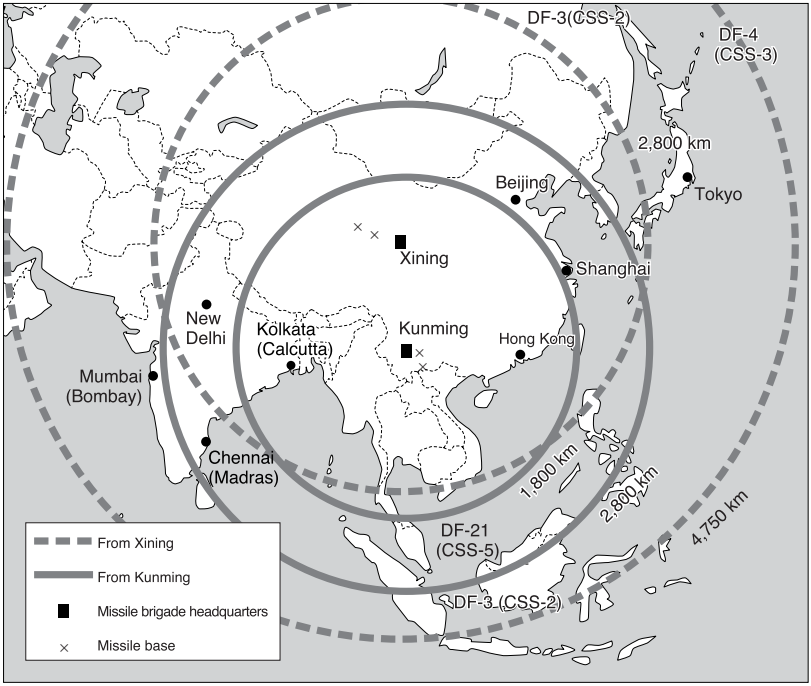
how will nuclear weapons affect the stability of the India-China border?

On the first question, the choice of weapons should be based on assessment of Chinese nuclear strategy. Research so far, however, has only been fragmentary at governmental level and among the strategic community. Since it is difficult to evaluate and predict China's intentions, research has focused on the configuration as well as the deployment of China's nuclear capabilities. Several research works point out that China's theater missiles, the *Dongfeng* (DF)-3 (CSS-2) (firing range: 2,800 km) and the DF-21(CSS-5) (firing range: 1,700 to 1,800 km) are either targeted at or capable of hitting India. In particular, it is believed that missile bases headquartered in Xining, Qinghai province and Kunming, Yunnan province, have deployed missiles that target India. On the other hand, considering the excessive yield (3.3 MT) of the DF-3 and its deployment area, one researcher believes that China's primary target must be the Russian heartland, followed by Southeast Asia, and that India had never been a target. However, even that researcher holds that there is a possibility that China's nuclear weapons will target India in the future. Especially, it is thought doubtful that China will stick to no first use if it acquires counter-force capabilities by developing a MIRV-ICBM DF-31 (range: 8,000 km) and by achieving higher accuracy with the DF-21.

In practice, the Indian government seems to put priority on intermediate-range ballistic missiles (IRBM). In December 1998, Prime Minister Vajpayee vowed in Congress to continue with the research and development of *Agni* missiles. *Agni*-II flight tests were carried out in April 1999 and January 2000. The *Agni* program had been suspended since the end of 1995, possibly due to pressure from the United States after three tests were conducted between 1989 and 1994. The *Agni*-II is a two-stage missile that is an upgrade of the *Agni*-I. For example, the *Agni*-II uses a solid propellant in the second stage instead of a liquid propellant and has a highly mobile platform.

Since the range of the *Agni*-II is 2,500 km and is thus not capable of

Chart 3-1. Ranges of Chinese Missiles



Sources: Ashley J. Tellis, *India's Emerging Nuclear Posture: Between Recessed Deterrent and Ready Arsenal* (Santa Monica, CA: RAND, 2001); National Intelligence Council, *China and Weapons of Mass Destruction: Implications for the United States*, Conference Paper, November 5, 1999 (http://www.cia.gov/nic/pubs/index.htm).

reaching Beijing or other cities in eastern parts of China, however, an argument in favor of ICBM has been raised even among those behind the Draft Nuclear Doctrine. Theoretically, India's advanced space technology can be converted to ICBM capability. In 1980, India became the seventh nation in the world to acquire satellite launching capability. Those early satellites only had a launching capability of 35 to 40 kg to low Earth orbit while the polar satellite launch vehicle (PSLV) that was successfully launched in 1994 has a launching capability of 3 tons to low Earth orbit. The PSLV is a four-stage rocket, which uses solid fuel in the first and third stages, and liquid fuel in the second and fourth. The PSLV success coincided with reports in the media of

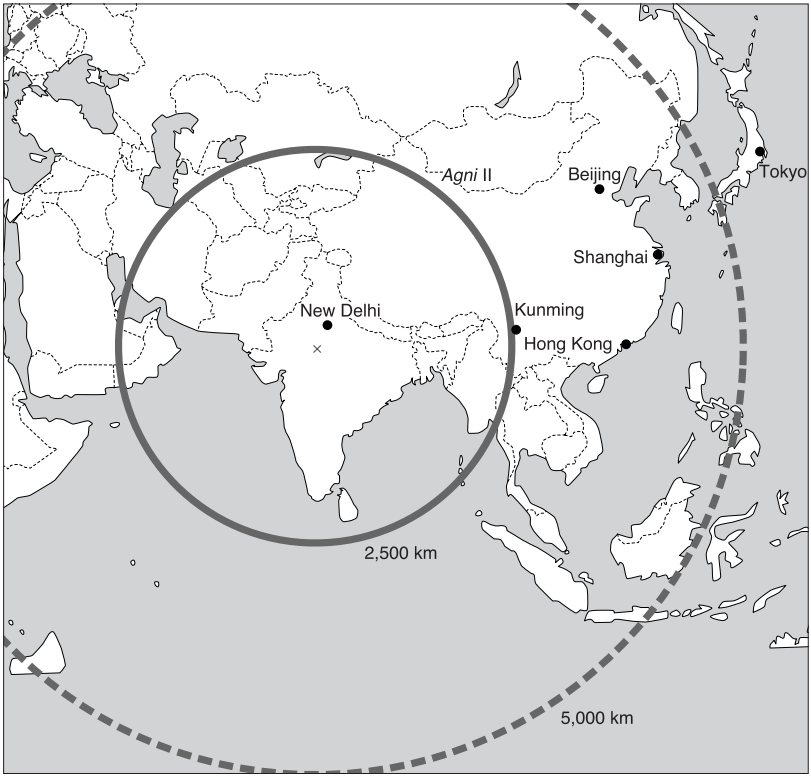
India's *Surya* ICBM program. Furthermore, in April 2001, India succeeded in launching a geosynchronous satellite launch vehicle (GSLV) using a cryogenic rocket engine purchased from Russia. India had intended a technology transfer at first. It shifted to the purchase of a completed product, however, as the United States imposed sanctions upon India and Russia in May 1992 for not complying with the guidelines of the Missile Technology Control Regime (MTCR).

***Agni* missile launch test (January 25, 2002, offshore of the eastern Indian state of Orissa)** (Reuters-Kyodo)

The PSLV and GSLV are civilian projects aiming at entry into the global communications space business in the fields of communications satellites and exploration. However, if converted militarily, India could obtain a 5,000-km range missile. Dr. A.P.J. Abdul Kalam, in charge of nuclear development in India, has declared that "all technologies and industrial complexes are available for an ICBM. It'll not take much time, should India decide on it." However, as Dr. Kalam admits, a cryogenic rocket engine is not suitable for missiles, since fuel supply would take time and require huge facilities. It has also been pointed out that it is difficult to change the gigantic body of a PSLV and GSLV to a more mobile type, and that its survivability is therefore still in doubt. The Indian government would have to make a decision of whether to develop an ICBM sometime in the future.

The second question, the stability of the India-China border remains a very sensitive issue and one that has been kept from the public. In an official report titled *Recommendations of the Group of Ministers on Reforming the National Security System*, released in February 2001, the part in which the issue of India-China border management is pos-

Chart 3-2. Range of India's Ballistic Missiles and Image of Their Extension



Source: Ashley J. Tellis, *India's Emerging Nuclear Posture: Between Recessed Deterrent and Ready Arsenal* (Santa Monica, CA: RAND, 2001) and other references.

sibly covered was kept undisclosed for reasons of government security.

There is a shared awareness in India that the country's military supremacy in the border area is falling apart due to China's military modernization. However, the relationship between this view and nuclear deterrence is not clear. There are two types of arguments. One considers nuclear weapons as political weapons and believes that nuclear testing by India has been effectively changing China's negative attitude toward border negotiations. The extreme side of the argu-

ment asserts that Tibet should be converted into a neutral zone with India tearing up the 1993 and 1996 CBM. The other accepts a role for nuclear weapons in complementing the weakening supremacy of India's conventional forces in border conflicts. One example of the latter type of argument is that Indian forces could use airborne weapons as well as short-range *Prithvi* ballistic missiles (SS-150, firing range: 150 km) to block the Chinese Himalayan passes and that the danger of China broadening the conflict could be countered by *Agni*-II missiles.

In the official view, a framework of confidence building with China is effectively functioning. It is believed that there will be no nuclear war between India and China, since it is assumed that China will not massively attack the border with conventional forces and would not endure a nuclear attack on any one of its local cities. The assessment of China's intention, that is, to what extent China will tolerate India's nuclear development or deployment, is based on detailed analysis. It is considered that China will respond to India's buildup of nuclear capabilities by reinforcing military assistance with Pakistan in the immediate future. In this sense, the Indian government is correctly assessing that India's nuclear weapons will not invite a nuclear arms race with China. However, the China factor is linked to the destabilization of South Asia through its military cooperation with Pakistan.

(2) Sea-Based Deterrence

The second challenge is to cope with sea-based deterrence, as part of the nuclear triad. Generally, sea-based deterrence is often argued for in relation to enhance survivability. While geographically speaking, a missile launched from the Indian Ocean would require a longer range to reach China, strong calls for sea-based deterrence exist in India. Thus, India is focusing on the development of sea-based ballistic and cruise missiles.

The first onboard firing test of the *Dhanush* short-range ballistic missile was conducted in April 2000. It is the naval version of the *Prithvi*. With an estimated firing range of 250 km, the *Dhanush* is

considered an antiship missile.

Regarding cruise missiles, the *New York Times* revealed a secret program with Russian cooperation involving the submarine-launched cruise missile *Sagarika* in April 1998. Although Minister for Defence George Fernandes admitted the existence of the program, the truth remains uncertain due to contradictory information from various sources. In marked contrast to the controversy over the *Sagarika* program, the purchase of the naval missile system from Russia in September 1999 has passed without comment so far. The type purchased by India has not been clearly stated. If it is a 3M54E (SS-NX-27), however, it is an antiship weapon with a 220 km firing range. It flies at a low altitude at supersonic speed and separates its warhead at the terminal stage, which makes it hard to defend against. A *Kilo*-class submarine fitted with the *Club* naval missile system was brought to India in July 2000 and commissioned as the INS *Sindhushastra*. It is believed that the *Club* naval missile system will be fitted to three *Krivak*-class frigates as well as three *Kilo*-class submarines under repair in Russia.

India's intense efforts to obtain ballistic missiles with a firing range of under 300 km as well as cruise missiles might be a reflection of India's strong desire to deny Chinese and U.S. presence in the Indian Ocean. In December 1998, the Standing Committee on Defence in the Lok Sabha House recommended that the government "review and accelerate its nuclear policy for fabricating or acquiring nuclear submarines to add to the deterrent potential of the Indian Navy in the face of the presence of the subsurface nuclear submarines and subsurface ballistic nuclear submarines of China and the United States in the Indian Ocean." The recommendation was noted by the government in October 2000.

This recommendation urges the government to accelerate its efforts to promote the Advanced Technology Vessel (ATV). The ATV plan began in the 1970s to construct an indigenously developed submarine. In 1988, India set out to introduce nuclear reactor technologies

by leasing a *Charlie*-I-class nuclear-powered cruise missile submarine (SSGN) from the Soviet Union. Various technical problems remain with this, however, including miniaturizing the 190-megawatt nuclear reactor. It is estimated that the construction of a prototype of the vessel will be completed around 2005 to 2006 and that the vessel will be ready for missile loading around 2010.

As can be inferred from these naval plans, "sea-based" deterrence should not mean deterrence in the form of a submarine-launched nuclear missile but rather a denial capability to check Chinese and U.S. naval action in the Indian Ocean. This denial capability seems to be pursued by a nuclear submarine equipped with ballistic missiles or cruise missiles with conventional warheads. In the long run, India may shift to a SLBM program. At the present moment, however, the issue is more related to military balance in the Indian Ocean and should not fall under the topic of nuclear deterrence against China.

(3) Deterrence and Limited War against Pakistan

The third challenge is securing strategic stability, which is a more urgent issue for relations with Pakistan than with China. As compared to India-China border disputes, the conflict between India and Pakistan over Kashmir comprises of national identities and, therefore, is likely to intensify. In addition, it is suspected that Pakistan has not given up on the option of challenging the status quo by the use of force.

To examine strategic stability between India and Pakistan, it is necessary to go back to about 1987, when Pakistan is thought to have acquired nuclear capabilities. The period from 1987 to 1990 witnessed several events reflecting the lack of crisis stability and arms-race stability between India and Pakistan. First, in response to the Soviet Union's withdrawal from Afghanistan, Pakistan appeared to shift its strategies to another front, Kashmir. It was around this time that Pakistan started supporting Islamic militant groups in Jammu and Kashmir or India-held Kashmir. As a result of acquiring nuclear capabili-

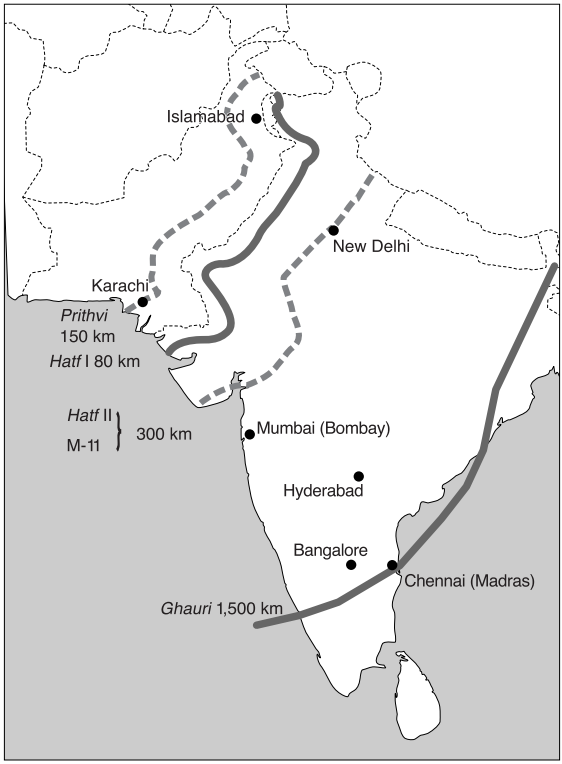
ties, the incentive increased for Pakistan to carry out pre-emptive nuclear attacks in cases where India escalated situations into conventional warfare. India's military intelligence agencies and some American researchers have expressed such concerns. Second, an India-Pakistan missile race started. In response to India conducting its first flight test of the short range ballistic missile *Prithvi* in February 1988, Pakistan displayed *Hatf*-I (80 km range) and *Hatf*-II (300 km range) missiles in March 1989. India then conducted the first test of the *Agni*-II (2,000 km range) the following May. Although the action may not have been intended to provoke Pakistan, the effect was to induce a Pakistani reaction.

The United States responded quickly to these strategic instabilities. In the early 1990s, many high-level U.S. government officials raised the alarm about the intensification of the nuclear and missile race between India and Pakistan. Something that must not be overlooked is that these remarks were not only aimed at promoting the nonproliferation agenda by putting pressure on India and Pakistan. The intentional leaking of information by the United States was measured to enhance strategic stability. The United States then had objectives to bring about an immediate freeze of nuclear development with an ultimate goal of nuclear dismantling and to cap the missile programs in both countries. The United States imposed sanctions against Russia's export of cryogenic rocket engines to India in 1992 and China's export of M-11 missiles (DF-11/CSS-7, 300 km range) to Pakistan in 1991 and 1993, for not complying with the guidance of the MTCR. However, these sanctions could only slow the pace of the arms race. After China demonstrated a more positive approach to nonproliferation by reaffirming its pledge to the MTCR in October 1994, Pakistan switched to North Korea as a supplier of missiles. It is thought that the intermediate-range ballistic missile *Ghauri*-I tested in April 1998 (1,300 to 1,500 km range) was based on the North Korean *No Dong* missile.

As to the crisis stability, a more low-key diplomatic strategy was

adopted by the United States. This has been successful to a certain degree. When India and Pakistan came close to war emanating from military exercises in 1990, there was serious concern in the then Bush administration over the possibility of nuclear war between the two. Encouraging both countries to promote CBM, the United States worked as a mediator to avoid an escalation in the crisis. Such endeavors resulted in the Agreement on Prevention of Air Space Violations (April 1991), the Agreement on Advance Notice of Military Exercises, Maneuvers and Troop Movements (April 1991), and the extending of the hotline between the two countries (December 1990). An agreement on the nonattack of nuclear facilities (signed in 1988) was ratified and lists of nuclear facilities were exchanged. India announced its no-first-use policy in 1994.

Chart 3-3. Firing Range of India and Pakistan's Missiles (Distance From Border)



Sources: Compiled from Waheguru Pal Singh Sidhu, *Enhancing Indo-US Strategic Cooperation*, Adelphi Paper 313 (London IISS, September 1997); www. fas. org/nuke/guide/pakistan/missile/ and other references.

Even after this series of stabilizing measures, the stability of the de facto mutual deterrence between India and Pakistan has been a central theme especially among researchers in the United States. Those

who doubt nuclear stability point out several factors, including the possibility of war between the two countries over Kashmir, deployment of short-range ballistic missiles, insufficient intelligence capabilities and fragile command and control systems.

The Kargil crisis, which lasted for two months from May 1999, was the first test of crisis stability after the nuclear tests. Islamic militants first crossed the Line of Control (LOC) from the Pakistan side. The Pakistan force then occupied strategic posts on Indian territory, developing into a massive armed conflict between both forces. Deploying an air campaign, the Indian armed forces gained superiority in the end. Pakistan asked the United States to be a mediator but had to accept a virtually unilateral cease-fire. The persuasion of the U.S. commander in chief of the Central Command brought a strong message to the Pakistan chief of army staff, which facilitated the cease-fire. This was another example of the United States taking on the role of a communications channel between India and Pakistan.

A significant point in terms of the nuclear factor in the Kashmir conflict is the Pakistani government's comment that India's restraint in not crossing the LOC was the effect of Pakistan's deterrent capability. *The Kargil Review Committee Report*, the Indian document that analyzes the Kargil crisis reveals that India's Joint Intelligence Committee was aware that Pakistan was conducting low intensity conflict under the nuclear umbrella and that the nuclear capability of Pakistan had made it difficult for India to escalate the conflict into a conventional war.

Even if a Kargil-type crisis occurs in the future, India is not likely to go beyond deterrence by conventional forces. After the publication of *The Kargil Review Committee Report*, India's strategic community started to discuss the concept of a limited war. According to Minister of Defence George Fernandes of India, a limited war is a war "confined to a geographical area," which is considered inevitable in the future. It seems that India is trying to raise the nuclear threshold between India and Pakistan through a buildup of conventional forces.

Unless India clearly demonstrates its political will on Kashmir, however, the doctrine of limited war would also fail to eliminate the possibility of the use of nuclear weapons by Pakistan. Since India has taken the position that all of Kashmir, including Azad Kashmir or Pakistan-held Kashmir belongs to India, Pakistan could misunderstand India's true intentions if India launches a counterattack by crossing the LOC, even by a few meters.

4. Strategic Role of India in East Asia

(1) India's Policy in Transition

The BJP responsible for the 1998 nuclear tests and currently in power, brought about a paradigm shift from a Nehruvian perspective to realism in foreign and security policy. Nehruvians and the realists share the same objective of achieving a "great" India. The former, however, hold that India should obtain the status of a major power through moral superiority, whereas the realists look to achieve the status through power politics.

Two points are worth noting here. One is the discarding of taboos regarding military matters. The BJP actively carried out a strengthening of the higher defense organization and established the National Security Council in November 1998. Later, the core Cabinet ministers presented the *Recommendations on Reforming the National Security System* in February 2001. In addition, the post of chief of defence staff (CDS) was established to reflect the voice of the military in the higher defense decision making. The fact that the CDS is assigned the administrative control of the strategic forces in the recommendations implies that the CDS will possibly acquire nuclear command in the future.

The other point is the shift from nonalignment to "broad-based engagement with the United States." The recommendations substantially recommend that India should enjoy benefits by bandwagoning with the United States under the assessment that the pre-eminence of the

United States shall continue in the post-Cold War global strategic architecture. This signals a clear departure from India's past foreign policy of seeking a multipolar world order.

(2) India, China and the United States: Strategic Triangle

Since the third India-Pakistan war in 1971, international relations in South Asia have had a three-layered structure: India-Pakistan conflict at the bottom, encompassed by China-Soviet and U.S.-Soviet rivalry in the middle and the top layers. The India-Soviet quasi alliance and the U.S.-China-Pakistan coalition had been opposing each other on issues affecting the regional balance of power. This structure was reinforced after the Soviet invasion of Afghanistan in 1979. From an Indian perspective, it appeared that the United States had been taking a more pro-Pakistan "tilt policy."

However, after the Cold War, or more precisely, after the Soviet withdrawal from Afghanistan, the United States has been modifying its "tilt policy." The second Clinton administration in particular reconsidered India's position in U.S. diplomacy, because of its potential as a trade market as well as the common democratic values the countries share. The underlying factors for the shift in U. S. policy are that India has been pressing forward with economic liberalization since 1991 and is becoming a promising country for U.S. investment and exports.

India's nuclear tests were a temporary setback to India-U.S. relations. By contrast, however, it also worked to strengthen the assessment that more engagement with India would benefit the United States. The Bush administration inaugurated in 2001 has followed a policy of engagement with India. What is unprecedented in the Bush administration's South Asian policy is that India is not only economically valued but strategically valued as a hedge against China's prominence. The U.S. government has been repeating that it will not see India as a counter balance against China. There is a core group in the Bush administration, however, that has been pushing for further engagement with India exactly for that reason. The Indian government

has been expressing reservations about containing China while being keenly aware of the correlation between their strategic role and U.S. policy with respect to China.

Reactions related to Missile Defense (MD) reflect this subtle but visible change in the balance between U.S.-China relations and India-U.S. relations. The Indian Ministry of External Affairs immediately welcomed Bush's May 1, 2001, address that suggests a review of U.S. security policy. The U.S. government dispatched Deputy Secretary of State Richard Armitage to India as well as to U.S. allies, Japan and Korea. India's welcoming statement demonstrates its support for "a

‹‹‹**Column**›››

Reforming the National Security System

In February 2001, the "Group of Ministers" (GOM) appointed by Indian Prime Minister Vajpayee released a report titled "Recommendation of the Group of Ministers on Reforming the National Security System." The composition of the GOM was: Home Minister L.K. Advani, Defence Minister George Fernandes, External Affairs Minister Jaswant Singh and Finance Minister Yashwant Sinha. The National Security Adviser Brajesh Mishra was designated as a special invitee to the meetings of the group. The report was brought out as an aggregate effort to deal with deficiencies in India's security management that were revealed during the Kargil Crisis in 1999. The report focuses on four areas: intelligence, internal security, border management and defense management. In May 1999, Pakistani militants intruded into the Kargil sector, and this led to the occupation of strategic territory on the Indian side of the Line of Control (LOC). This was a surprise raid for which India was not prepared.

The chapter of the report on the intelligence apparatus has been kept confidential. The chapter on internal security brings to light problems related to the forces deployment in aid of civil power. It also defines the roles of the police, paramilitary forces and the Home Ministry. The chapter on border management looks into the specific border management measures for each of the respective bordering countries. Finally, the chapter on defense management emphasizes the importance of "integration" of service headquarters into the government.

new strategic framework" comprising of four elements: MD, nonproliferation, counterproliferation and a reduction in the U.S. strategic nuclear arsenal. Although MD comprises only one of the elements, India must have been expressing support for MD in a cautious manner, since there seems to have been a prior India-U.S. discussion on MD. Expectations for a lifting of sanctions by the United States and future "insurance" against China could be among India's main motives for supporting MD. If we look more deeply, however, we can see India's underlying calculation that achieving the status of a U.S. strategic partner is advantageous for India. India is striving to attain the status of a major power as a nuclear state and becoming a permanent member of the United Nations Security Council. India is aware that it could only be achieved through cooperation with the United States in the area of global security. It was also within this context that India immediately expressed its support for the U.S. counterterrorism operations after September 11.

India's rivalry with China would evolve around the question of partnership with the United States, that is "which country will win out as the major partner?" In terms of security cooperation with the United States, India has rich experience in peacekeeping operations (PKO) and counterterrorism activities. It also holds military resources such as the Andaman Nicobar, a strategic post in the Indian Ocean. India's diplomatic resources are also difficult to dismiss. Having had a long-established friendship with some ASEAN states such as Vietnam and Indonesia, India succeeded in winning approval for an India-ASEAN summit scheme in November 2001.

There is no doubt that India will play a significant role in constructing the future East Asian security order. India will fulfill this role as one of the major actors in the power configuration among the United States, China and India. At the same time, India would carry out its role as a member of multilateral dialogues in the Asia-Pacific region, including that with ASEAN.

‹‹‹**Column**›››

The Third India-Pakistan War and the Dispatch of a U.S. Aircraft Carrier to the Bay of Bengal

The third India-Pakistan war, which developed from strife between East and West Pakistan, ended with the surrender of Pakistan as a result of crisis bargaining among the United States, China and the Soviet Union. The formal war lasted for less than two weeks after Pakistan's air attacks in the Western front on December 3, 1971. The United States had been willing to tolerate East Pakistan's (later Bangladesh) quest for independence. However, the United States could not allow India to alter the power balance in South Asia by defeating Pakistan, a friend of the United States that had facilitated the normalization of U.S. ties with China. Moreover, India had just become a de facto ally of the Soviet Union, the Cold War adversary of the United States. On December 10, U.S. President Richard Nixon ordered the dispatch of the USS *Enterprise* to the Bay of Bengal. According to Henry Kissinger's memoirs, the purpose of dispatching the carrier task force was to deter India from destroying West Pakistan.

This dispatch of an aircraft carrier by the United States became deeply etched in the memories of Indian strategists as "U.S. gunboat diplomacy." India also felt it was restrained by the United States, China and even by the Soviet Union, which persuaded it to finally accept a cease-fire. Because all three states were nuclear powers, this experience also increased India's incentives to acquire nuclear weapons. Furthermore, this incident prompted the Indian Navy to expand its role from inshore patrol to blue-water navy activity in the Indian Ocean.