

“Nuclear South Asia: A Guide to India, Pakistan, and the Bomb”

Video Transcripts

Chapter 4: The Global Nuclear Order

4.1: “Nuclear Proliferation and Nonproliferation”

- Scott Sagan: 00:10 Why do states build nuclear weapons in the first place? There are three basic models that political scientists use to help explain such decisions. The security model, which argues that states acquired nuclear weapons if, and only if, they have a security threat that cannot be met by other means. A domestic politics model that suggests that different domestic political actors have interests, often parochial interests, in acquiring nuclear weapons, and when they acquire the power and the authority to make decisions, they will seek nuclear weapons for the state, even if there isn't a security threat commensurate with that need. Lastly, there are normative models that argue that nuclear weapons serve a prestige, a status role, in international politics, and a statesman might decide they want nuclear weapons because they want the prestige, the status of being a great power, and believe that nuclear weapons are the surest path to get that.
- Nicholas Miller: 01:15 In general, the U.S. has been opposed to proliferation because it understands that it reduces America's influence and its military's freedom of action. There's also a concern that ultimately, more nuclear states increases the likelihood of nuclear war. With respect to adversaries, the concern is generally that the U.S. will be deterred from using military force against our enemies, which is not viewed as a positive thing in Washington with respect to allies. The worry is more that the U.S. will lose its influence. When it comes to unaligned states like India, it's not necessarily that the U.S. is opposed to proliferation in that country, it's that if a country like India gets nuclear weapons, it might lead other countries that are viewed as more dangerous to do the same. So this links back to the idea of the nuclear domino theory, which is important for understanding why the U.S. has opposed proliferation across the board.
- Neil Joeck: 02:04 Nuclear proliferation has been a concern for the U.S. since 1946 after the weapons were tested in 1945 and then used in the war with Japan. A key document was written by Bernard Brodie, then a professor at Princeton University, called “The Absolute Weapon.” In “The Absolute Weapon,” he sees nuclear weapons as having a transformative effect on international relations. The

destructive power of weapons meant that powerful states could be threatened by weaker states. It put a premium on an ability to deliver weapons against the enemy because with the introduction of nuclear weapons, Brodie recognized a critical problem, which was that there was no defense against them. Therefore, delivery was an important issue. A powerful state like the United States could recognize the challenge that will be posed by other states having nuclear weapons, the instability that would be created by states then racing to acquire their own.

Jeffrey Lewis: 03:07 The international community was really slow to recognize the dangers of the spread of nuclear weapons. Early on, everyone thought, "Well, nuclear weapons are just another munition, and it's good if our friends have them and only bad if our enemies have them." That started to change in the 1960s. And initially it was China. When China tested a nuclear weapon in 1964, the United States government underwent a series of reviews that ultimately culminated in the United States deciding that a nonproliferation treaty would be a good thing. Even then, though, there was almost no infrastructure to support the political commitments in the Nuclear Non-Proliferation Treaty.

Francis Gavin: 03:49 So the U.S. has a wide array of tools and you might want to think of them on a continuum, something like, kind of a Goldilocks metaphor. There's sort of "hot," "cold," and "just right." And you might think of the hot measures as coercive, economic sanctions, ostracizing the state, even the threat or actual use of military power to prevent the program from moving forward. On the other end of the spectrum, you might think of things like norms and international law, taboo, and ideas that the United States encourages the world community to think that nuclear weapons aren't something they should possess. There's sort of a middle road, you might think of as "just right," which is to offer inducements, particularly to allies but also to others, if they go without nuclear weapons. Alliances, security guarantees, perhaps the sale of conventional weaponry. Traditionally, the U.S. has mixed and combined all three of these tools, sometimes in different ways according to different administrations and according to the particular situation of the proliferating state in question. But all three tools have in one time or another proved effective.

Nina Tannenwald: 05:09 The nuclear taboo is a de facto non-use norm, but it's not simply a norm. It's also a taboo in that it has a sense of obligation attached to it. So it combines strategic self-interest with moral concern, that is, countries have a self-interest in not using nuclear weapons, that if you're in a situation of mutual assured

destruction, you don't want to use nuclear weapons because you'll get that retaliatory use of nuclear weapons against you. But there's also a moral element to it. And this has to do with the excessive, massive destructive power of nuclear weapons and the devastating damage and consequences that the use of nuclear weapons would bring. So nuclear weapons, most uses of nuclear weapons, would violate any sense of proportionality and discrimination, and leaders have come to accept this and to understand this. And so, when we look at this taboo, it's not simply a strategic interest, but it's a moral element as well.

Michael Krepon: 06:18

Nobody likes nuclear anarchy. That's a threat to everybody. And so, people have wanted some sort of nuclear order. People want nuclear order when it comes to vertical proliferation, they don't like rising sizes in nuclear arsenals, and people want nuclear order when it comes to horizontal proliferation. They don't want new entrance to the nuclear club, because every new entrant creates more disorder, less order. So we need building blocks, and we need mechanisms to prevent vertical proliferation and horizontal proliferation. The primary mechanisms against vertical proliferation have been arms control and then arms reduction treaties between the two countries that have the most of these weapons: Washington and Moscow. And the primary mechanism against horizontal proliferation has been the Non-Proliferation Treaty.

4.2: “The Global Nuclear Order”

- Michael Krepon: 00:05 What is the global nuclear order? Well, it consists of states that have nuclear weapons and states that don't. That was the thinking behind the Non-Proliferation Treaty, which was signed in 1968. And the United States and the Soviet Union, the two superpowers, were both very much in a harness in making this treaty happen. Neither one wanted additional nuclear weapons states; neither did Great Britain and France, or China. Those five, the permanent members of the UN Security Council, had already tested nuclear weapons by the time the treaty was negotiated, but this left out India and Pakistan. They were unhappy with this global nuclear order. They had security concerns, unlike other states that hadn't tested nuclear weapons and were very content to be declared non-nuclear weapons states. India and Pakistan weren't. Neither was Israel. These three countries did not sign up to the treaty. They were outliers. They had serious security concerns. They felt, sooner or later, they needed to have nuclear weapons.
- Toby Dalton: 01:36 The global nuclear order, I think of, as a system of agreements, treaties, and rules that establish and prioritize relations among states and create some preferences and disadvantages for those states, at the same time. So, the center of this order is the Nuclear Non-Proliferation Treaty, and it creates these two categories of states: the states with nuclear weapons and the states without nuclear weapons, essentially the P5 and everybody else. That creates basic categories in this nuclear order, and it allows some states legally to retain nuclear weapons, albeit under the proviso that they are committed to working towards disarmament, and it prevents other states from developing nuclear weapons and commits them to undertaking safeguards with the International Atomic Energy Agency to ensure that they're not illicitly producing nuclear weapons or diverting material from their program.
- Jeffrey Lewis: 02:39 The Nuclear Non-Proliferation Treaty, as the name suggests, is a treaty to stop the proliferation or spread of nuclear weapons. It comprises many bargains. Some people talk about a grand bargain, which is a bargain among those states that have nuclear weapons to disarm in exchange for nonproliferation among those states that don't have nuclear weapons. Other people like to emphasize the bargain between those states that have nuclear technology. They have to make sure that they provide access to nuclear technology for peaceful uses to those states that agreed not to build nuclear weapons. But I think the most important bargain is among the non-nuclear weapons

states themselves. We often think about the NPT as though it's an agreement between those states that have nuclear weapons and those states that don't have nuclear weapons, but far in a way, the biggest security benefit for any state is that its neighbors stay non-nuclear.

George Perkovich: 03:30

There are lots of ways that scholars would define a nuclear order, and you can define it legally by saying it's the Nuclear Non-Proliferation Treaty and then the subsequent institutions and rules that evolved through the Nuclear Suppliers Group and export controls and all of that, and all of that is valid and important. I guess I would think of it more in terms of, what are the kind of normally accepted behaviors for states that have nuclear weapons and that have not violated the Non-Proliferation Treaty? So that means you know the U.S., Russia, China, the United Kingdom, France, and also India, Pakistan, and Israel, because they never signed the Nuclear Non-Proliferation Treaty. So what's valid behavior and normal behavior for those states, and then what's normal, accepted behavior by states that did commit not to acquire nuclear weapons? So these are non-nuclear weapons states under the NPT.

Scott Sagan: 04:30

There are 31 states that have nuclear power plants today and only nine states with nuclear weapons. Of those 31 states, many of those states have the technological wherewithal to build nuclear weapons, had they chosen to do so. There are more states acquiring nuclear power today. This is a great achievement, to have the growth of nuclear power exist around the world, without the equivalent growth or proliferation of nuclear weapons. The Non-Proliferation Treaty and a variety of other mechanisms are very important in reducing the incentive and the willingness of states to move forward with building nuclear weapons, even after they've acquired some of the materials and the technology through their acquisition of nuclear power, civilian nuclear energy capabilities that could, in a different world, be used for nuclear weapons.

4.3: “The Nuclear Non-Proliferation Treaty (NPT) and South Asia”

- Shyam Saran: 00:12 There is the Nuclear Non-Proliferation Treaty, which recognized that there are five nuclear weapons states as of 1967 and incorporated a certain understanding between those who have nuclear weapons and those who do not have nuclear weapons. But this particular order was never comprehensive, precisely because there were several states which were nuclear capable states, which did not join the NPT, and currently, in addition to the five nuclear weapons states, there are also at least four states which have nuclear weapons, which are not parties to the NPT, including India itself. Therefore, the legitimacy of the NPT order is, to some extent, contested. So how do we construct a new regime which recognizes that there are these new challenges and also deals with the perennial problem that as long as you have some states which have nuclear weapons and a very large number of states which do not, they will always be an attempt on part of some of the states, which feel their security threatened, to try and seek nuclear weapons? Overcoming that is only possible through nuclear disarmament and putting in place very comprehensive, universally applicable, and somewhat intrusive verification procedures. So looking once again at the issue of nuclear disarmament and linking nonproliferation to that goal, in fact, in a sense, reiterating that goal is something which has become very, very important.
- Toby Dalton: 01:56 In some senses. India and Pakistan are part of the order because they belong to some agreements and adhere to some different arrangements. They are both members of the IAEA, they both have IAEA safeguards on some of their facilities, and so in that aspect, there's a partial integration with some of the regimes. And yet because they did not sign or ratify the NPT, they're not really legally considered to have the rights and privileges that other states that are NPT members have. Now, that said, India has been given some accommodation and some preference. In some ways, perhaps, it has an even better deal than states that are NPT parties in that it has nuclear weapons and is permitted, because of the Nuclear Suppliers Group exception that it was granted in 2008, to enter into nuclear cooperation for energy and other peaceful purposes with states that have and are willing to trade with India on these issues. Pakistan, on the other hand, has not been given such a deal, and so it, at this point, seems to have perhaps a lesser status in the nuclear order, is slightly more disadvantaged than India, which is why it is very actively seeking to promote its own potential membership in the Nuclear Suppliers Group, in order to level the playing field.

- Zamir Akram: 03:19 Well, in my view, I think we are in the mainstream, and we are normalized, but the question is: who is going to normalize and who is going to mainstream? There are three countries that are not in this so-called nuclear de jure club, which is the P5, the recognized nuclear weapon states. But then there is India, there's Pakistan, and Israel, which are de facto nuclear weapons states, but outside this nuclear club that has come into being after the NPT was signed. Now the situation is that we, or the international community, needs to find a way of dealing with these countries that are nuclear weapon states, but non-NPT signatory states, and what is their place going to be in this international arrangement.
- Riaz Khan: 04:28 Pakistan is a nuclear weapons state. Now, the question of place – I don't think that there are any gradations, or classification, of nuclear powers. Nuclear powers are nuclear powers, so that is a fact that needs to be recognized. We want to engage with the international community in all efforts relating to arms control and nuclear nonproliferation, but one thing that rankles with us is that there's some discrimination which has been practiced against Pakistan, which still prevails. One of the evidence of that is the position by some of the countries on Pakistan's membership to NSG and India's membership to NSG. These kinds of distinctions, in my view, are not helpful in terms of global efforts for nuclear nonproliferation and arms control. Pakistan needs to be considered as a partner in these efforts. And that should be on a nondiscriminatory basis.
- Mark Fitzpatrick: 06:00 Now Pakistan, along with India and Israel, have been courted a status of outliers, states that possess nuclear weapons (it is presumed in Israel's case) and that are outside the NPT. So they don't fall into any of the categories of the NPT. They don't adhere to the safeguard system that's universal in the NPT regime, but they do accept safeguards on some of their facilities, and they do accept some of the other means of the nuclear order. The various conventions on governing nuclear safety and nuclear security, and Pakistan has improved its export controls to be consistent with the controls of other countries. So, they're in a halfway house, as it were. They're not part of the global nuclear order, but I think it's wrong to consider Pakistan a rogue state.
- Rakesh Sood: 07:04 The Indian position vis-a-vis the global nuclear order has remained reasonably consistent. In fact, even though we've not been part of the NPT, we have perhaps had a much cleaner record than many NPT member states in terms of our commitment to nonproliferation. We have also had a very strong commitment to global nuclear disarmament, and at the

same time, like any other country, we have had to maintain a nuclear – what was a nuclear option, and we converted that very reluctantly into becoming a nuclear weapons state. So I would say that India is perhaps the only country which would be a very reluctant nuclear weapons state, because having demonstrated its capability in 1974, we actually waited for nearly a quarter century till 1998, before India became a declared nuclear weapons state.

Rajesh Rajagopalan: 08:02

The global nuclear order, at present, is under some pressure. India, I think, hopes that it will survive, but India is not entirely sure, I think, as how to go about strengthening that or what role India can play in strengthening that, and one of the things that India has done in the last few years is to seek membership in the various technology control regimes, in the hope of strengthening that regime. India definitely, I don't think, would appreciate or accept the widening of the nuclear circle, as it were, to include more countries.

Leonard Spector: 08:43

The role of India and Pakistan in the global nuclear order is a bit fraught. They have two different roles to play. One is the role as nuclear weapons states with their own deterrence, nuclear postures, saber-rattling, and tensions, and that certainly, if it were to come to blows, and a nuclear weapon were to be used, would upset the international nuclear order terribly. It'd be catastrophic. If they remain at peace, and some accommodation is reached or mutual deterrence is assured, perhaps then they can make a contribution to the global nuclear order through responsible management of their nuclear arsenals and avoidance of leakage of nuclear goods and things of that kind.

4.4: “The Comprehensive Nuclear Test-Ban Treaty (CTBT) and South Asia”

- Michael Krepon: 00:05 India was a strong supporter of a comprehensive test ban. Prime Minister Nehru believed deeply in it, was one of the primary opponents of nuclear testing. But by the time that the negotiations actually took place to complete a comprehensive test ban treaty, India was between a rock and a hard place. It tried to be true to its disarmament and test ban treaty heritage, but it had obvious problems in the neighborhood. Pakistan presumably had bombs in the basement. China had a nuclear arsenal it had already tested. So what to do? India remained a part of the treaty negotiations really until the eleventh hour, and backed away when the entry-into-force provision of this treaty was crafted. Entry-into-force means the treaty remains in limbo until countries signed and ratified. How many countries? Well, the solution that the negotiators drafted was that over 40 countries had to sign and ratify, countries that had nuclear capabilities. And India viewed this as a very impolite way of roping them into a treaty and constraining their sovereign rights. So India walked away.
- Sheel Kant Sharma: 01:55 The exposition of the CTBT, is essentially a de facto implementation of the main obligation of CTBT, which is abjuring nuclear tests, and India has a moratorium on nuclear testing, which it has consistently upheld despite change of governments. So it is actually now three governments in Delhi which have maintained the moratorium on nuclear testing, which is the main obligation of the CTBT. As far as the signing of the CTBT, India's position has been that it will not averse to, it will not be in the way of, the entry into force of the treaty.
- Jayita Sarkar: 02:44 In the mid-1990s, as the CTBT was being negotiated in Geneva, India played a very active role, like it did once again, with the ENDC negotiations for the NPT. However, it refused to sign eventually, primarily because of two reasons. That is, according to India, it was not going to lead to universal nuclear disarmament. And second, it considered the treaty to be discriminatory because countries like India still needed to conduct nuclear tests. Because such tests were conducted so many times by the superpowers to perfect their nuclear devices.
- George Perkovich: 03:25 The scientific establishment, again, had been very frustrated. They had wanted to test since after the 1974 test, and they had come close several times and had been authorized to dig holes in the ground in the early '80s. They still wanted to push. Number one. Number two: they were aging. So the people who

designed the device and tested it in '74 were aging and getting closer to retirement, so they worried that you needed a new cadre, new leadership, in the establishment who would be able to be both motivated, but also have some confidence in what they were doing without a test. It was going to be very difficult to, kind of, transfer knowledge and bring in and recruit new talent into the system. There was also the feeling that if the Nuclear Non-Proliferation Treaty was going to be extended indefinitely, which ended up happening in mid-1995, India was then going to come under enormous pressure with a comprehensive test ban, and that this was a priority of President Clinton and others. And so Indians looked out, the Indian leadership looked out, and said, "well we may come under such severe pressure with the test ban, that we might not be able to test unless we do it before they agree on the test ban." Now as we know, the test ban was completed in '96. It still hasn't entered into force. So there was this big move to test in '95, and then when it was discovered by the U.S., the U.S. put pressure on the government of Narasimha Rao at the end of '95. Once again, there was this sense that it just wasn't that important politically, it wasn't so important for the political leadership to run the risk of sanctions and international isolation. So they avoided it, and there was a new government coming, there were elections coming in '96, so it was put off in '95.

Feroz Khan: 05:30

Into the mid-1990s when the CTBT debate began, that was the other part where Pakistan decides as to how they would respond in the event India conducts a test. And this is the period after it was discovered that India might conduct tests, just as the run up to the CTBT negotiations. It was at that time the Pakistani policy was that if India conducts a test, they will conduct a test.

Riaz Khan: 05:59

CTBT was one of the issues which was raised with us formally when Mr. Strobe Talbott undertook negotiations with Pakistan and India following the 1998 nuclear tests by both the countries. So CTBT was one on one of the items. I mentioned that before that, before 1998, Pakistan had always offered that it would be prepared to sign CTBT along with India. Now during these negotiations, because Pakistan had come under sanctions after the 1998 tests, we were under pressure and we were very seriously considering that should be sign CTBT, under a caveat which was provided within the body of the treaty itself, that if there is a change of circumstances, then we could also revisit our position? So we were really seriously considering that. But then in 1999, as you will recall, the United States itself did not ratify; the Senate rejected ratification of this treaty. After that,

the debate within Pakistan turned the other way that, well, an important country like the United States, in fact the most important country in these matters, is unable to ratify it, then why should we be in a hurry?

Zamir Akram:

07:54

The CTBT is a treaty that Pakistan supported. We voted in favor of the UN resolution that adopted this treaty. However, at that time, since the Indians refused to sign this treaty, we have had the concern that the refusal to sign this treaty denotes or indicates an Indian desire to test again, sometime in the future. And if that happens, then we would also have to follow suit, and we may be compelled to test ourselves. And that's the reason why we have not signed the CTBT, but what we have done is to undertake a unilateral moratorium on not testing. And the other step that we have taken, in the days that we had a dialogue with the Indians in 1999, is for both sides to maintain their unilateral moratoriums, their respective unilateral moratoriums. That's part of the Lahore Agreement in 1999.

4.5: “The Fissile Material Cut-Off Treaty (FMCT) and South Asia”

Reshmi Kazi:	00:07	India's stance on the FMCT is that it is supportive of a fissile material cut-off treaty and looks forward to a speedy implementation and adoption of the treaty, which was emphasizing the Indo-U.S. nuclear deal. However, the treaty negotiations are currently blocked by Pakistan at the Conference on Disarmament.
Toby Dalton:	00:28	India's position on the FMCT is a little bit difficult to discern. On the one hand, in the agreement that it struck with the Nuclear Suppliers Group in 2008, India agreed to support the conclusion of a fissile material cut-off treaty, the conclusion of negotiations on an FMCT. That position has never really been put to the test because there has never been a commencement of negotiations on an FMCT at the Conference on Disarmament in Geneva. So the Indian position, I think, is a little bit untested, and there's some reason to believe that if there were actually to be a negotiation, that India's position might actually be quite negative and that it might seek to slow down or also potentially block those negotiations.
Zamir Akram:	01:17	FMCT is, in our view, a limited approach to dealing with the issue of fissile material because it will only ban the future production of fissile material, but leave untouched huge reserves of existing fissile material stocks. We have actually proposed, in the Conference on Disarmament, a practical, pragmatic way of dealing with this issue of stocks, whereby the treaty that we propose would ban future production, but would also account for the existing stocks. And if one reads this proposal, which is on the records of the Conference on Disarmament, you can see that this is a practical way of actually achieving this. In short, what it means is that you would separate, designate that fissile material which is meant for, or within the use for, production of nuclear weapons or exists within nuclear weapons. Then there is that fissile material which is to be used for naval propulsion, and then that leaves the excess material that is not designated for any purpose as of now, and each country that possesses this needs to then account for how much they have, and then we can decide on how to deal with that. You can convert that, technologically possible to convert that, to civilian use, but we need to know how much there is and how much is going to be converted to civilian use. So that's the kind of fissile material treaty that Pakistan would like to see.

- Mark Fitzpatrick: 02:56 It has been almost single-handedly blocking negotiation of a fissile material cut-off treaty in Geneva. Now, there might be some other states that are hiding behind Pakistan's veto of the talks, but the others, India, China, and Israel would be at least willing to see it negotiated. Pakistan doesn't even want to see it negotiated, much less willing to sign onto a set to treaty. I think Pakistan's position here is unacceptable and that other countries may look for ways to put an FMCT in place that avoids the consensus requirements of the Geneva-based Conference on Disarmament.
- Pervez Hoodbhoy: 03:40 The reason Pakistan stands alone in the negotiation of the Fissile Material Cut-off Treaty is because it wants a lot of fissile material for making more nuclear weapons to be used on the battlefield. Now, there's been a total shift in Pakistan's nuclear posture. Earlier on, Pakistan acquired nuclear weapons for facing off India's nukes. With time, that changed. It became – these became a means for countering India's greater numerical strength on the battlefield. Pakistan now fears that India will launch a quick, surgical strike into Pakistani territory, for which, it has said, it will use battlefield nuclear weapons, and these battlefield nuclear weapons have to be very many in number. Let's remember that if you use, let's say, one nuclear weapon, it might take out a dozen tanks or so, but not more than that. If you then use, maybe 20 or 30, then that's as many nuclear weapons that you've got to make. Let's also remember the fact that if you have a nuclear weapon, let's say of 20 kilotons, it's going to need, let's say, 25 kilograms of highly enriched uranium or five to six kilograms of plutonium. But if you want to make a nuclear weapon, which is, let's say, a tenth of that blast power, let's say of two kilotons yield, you don't use one tenth of that amount of fissile material. You use much more than that. You may use, maybe, half as much, and so the reason Pakistan wants more fissile material is because it needs now to make dozens, in fact, hundreds of nuclear weapons, and for that it's got to have reactors, it's got to have means of producing fissile material, and that's why it is opposing the fissile material cut-off negotiations.

4.6: “AQ Khan and the Global Nuclear Order”

- Jeffrey Lewis: 00:06 AQ Khan was a Pakistani metallurgist who worked in Europe. He worked for a company that supplied components to EURENCO, which was the big European centrifuge manufacturer. AQ Khan figured out something really interesting. In the 1960s and 1970s, no one in the West thought a country like Pakistan could build centrifuges because the industrial requirements were way too high. But Khan realized that EURENCO didn't make its own components; they imported them. And so he used his connections in the centrifuge business, basically, to turn the entire world into Pakistan's industrial base. So he had a kind of organizational revolution in which he figured out that Pakistan could build centrifuges using tools, materials, and components that he acquired from abroad. That was essential to the success of Pakistan's nuclear program, but then very interestingly, in the 1980s and 1990s, he went into business. There's some dispute about whether the transactions were encouraged by the Pakistani government, whether they were encouraged by Khan, or whether it was some odd combination of both. But by the late 1990s, Khan had transferred or attempted to transfer this technology to a number of countries, most notably Iran and North Korea, which are still proliferation issues today. This has really changed how we think about nuclear proliferation. One huge impact of the Khan Network is we now care about centrifuge proliferation. Whereas in the past, we thought it was too complicated for relatively poor states to do, we now realize that the world itself serves as an enormous industrial base that an enterprising person can use in order to get all of the components, materials, and machine tools they need. I think the second impact is we've started to realize that because these technologies have diffused so widely, that trying to approach nonproliferation as purely a supply-side issue and cutting off countries is likely to be less effective than it was in the past.
- Robin Raphel: 02:03 AQ Khan is an iconic figure in Pakistan, still. He's widely viewed as the father of the Pakistan nuclear program. He's a symbol of national pride and a very popular fellow. But it came to light later that he, in fact, had traded nuclear technology for missile technology with North Korea, and that he had, in various ways, shared highly sensitive technology with other countries like Iran and Libya. In fact, he became the embodiment of our worst fears about proliferation.
- Robert Einhorn: 02:43 AQ Khan and his network were responsible for starting off Iran's centrifuge enrichment program. It was responsible for getting North Korea its start in the enrichment area. It provided Libya

with equipment and technology for enrichment. Libya was not sophisticated enough to turn those boxes, those crates full of centrifuge equipment, into functioning enrichment capability, but Iran and North Korea were. Iran's nuclear program today is based, almost entirely, on enrichment, and this technology was made available to them by AQ Khan. Similarly, although North Korea also has a plutonium-based program, it has now embarked on enrichment on a major scale. And it was started off on the enrichment track by AQ Khan. So AQ Khan was, by any measure, the most serious threat to nonproliferation that we've ever seen.

Thomasingar: 04:06 He provided a wake-up call to the international system that both led to the discovery of mechanisms, channels, breaking up of the process of the acquisition of nuclear weapons in the small, hard-to-find pieces, the tightening of control regimes, the strengthening of police and other activities worldwide, border protection people, that has made it much, much more difficult for anybody to repeat that. It also demonstrated how globalization, how computerized manufacturing has made it, in some ways, easier to acquire the elements for a nuclear weapon because you do not have to have all the capabilities yourself, and the people supplying it to you do not necessarily have to understand that it is for a nuclear weapon.

Sharad Joshi: 05:02 The consensus amongst most scholars is that we still don't know everything that went on in this particular network. Now, from the Pakistani perspective, there's one interesting phrase that the Pakistani foreign office has been using for the last eleven years or so. From their perspective, the AQ Khan Network is a "closed chapter." This is a phrase that is frequently used as a response to questions concerning the AQ Khan Network. If you Google "Pakistani Foreign Office" and "closed chapter," you will see a ton of responses. So from the Pakistani perspective, they don't need to reveal anything else. For the international community, there's been, at regular points, you've seen somebody or the other, some government or the other wanting to know more about the AQ Khan Network, perhaps through direct interviews or interrogation of Khan. What all did he supply, who were the recipients, and very importantly, who else was involved in the network? That raises several questions. One is, "Are those individuals still around?", which has implications for whether this kind of network can emerge again, in some other shape or form. The other question is in terms of accountability. Have those individuals and entities who were involved in it, at least from the Pakistan side of things, you know, have they been prosecuted to the fullest extent of the law? And the answer to those questions is no, because

remember, AQ Khan also was never prosecuted. He was put under house arrest for five years and then he was let go. So you have all of these lingering questions.

Lisa Curtis: 06:55

The revelations that AQ Khan had been peddling nuclear material to countries like Iran and North Korea was actually devastating to the U.S.-Pakistan relationship. I think it was viewed as the biggest proliferation disaster in history, and so I think it did pose a lot of challenges to the U.S.-Pakistan relationship, and particularly because the U.S. was unable to debrief or interview AQ Khan during this whole process. So there was a lot of frustration. The fact that he was not prosecuted in any meaningful way, I think, sort of, added insult to injury when it came to the U.S.-Pakistan relationship. I think it still is a factor in bilateral relations, particularly when it comes to U.S.-Pakistan nuclear cooperation and why the U.S. is unwilling to provide a nuclear deal to Pakistan along the lines of what the U.S. has done with India.

Toby Dalton: 08:11

They said that there were no laws in place at the time in Pakistan that he violated, but now they've subsequently put in place a WMD control law that is designed to control nuclear and other WMD technologies. They've stood up an inner agency division called the SECDIV, which brings together officials from a number of different departments to monitor and control strategic technologies and to do outreach and industry compliance. And Pakistan also did some level of cooperation with the IAEA in its investigation of the materials that were origin in Pakistan and then showed up in Libya and in Iran. But I think there are concerns remaining about AQ Khan, in part because it's perceived by the international community that he was not sufficiently punished for his actions, and this is probably the gravest single incident to damage the nonproliferation regime and to spread nuclear technology around the world. And so there is some sense that he needed to be specifically punished. There's also a sense that the Pakistani government was not sufficiently cooperative with the IAEA and its investigation, and in particular, by making Khan available for interview by IAEA inspectors so that they could understand, directly from him, the scope of his activities. And because of their unwillingness to make him available for interview, it creates a suspicion that they have more to hide and that the government was complicit in his activities in some way, and that they don't want to make him available because he then might make clear that the government was somehow involved in this, and that would be very damaging to Pakistan's international reputation.

4.7: “Laying the Groundwork for the Indo-U.S. Nuclear Deal”

Instructor:

00:05

The groundwork for the Indo-U.S. nuclear deal was built by two diplomats: Jaswant Singh and Strobe Talbott. Both men began a dialogue after the 1998 nuclear tests to resolve differences over India's nuclear weapons program. Although neither side reached an agreement by the end of the Clinton administration in 2001, the dialogue built trust that ultimately led to negotiations on a nuclear deal. After the agreement was finalized in 2005, the biggest obstacle was to perceive domestic approval. The United States Congress needed to revise Section 123 of the Atomic Energy Act to allow nuclear trade with India, which had never signed the Nuclear Non-Proliferation Treaty. In December 2006, Congress successfully revised the legislation. Congress then needed to approve the deal itself. Approval was contingent upon consent for the Nuclear Suppliers Group. When this was achieved in December 2008, the bill was passed by the Senate the following month. India's coalition government needed a vote of confidence by the Indian Parliament, which had displayed resistance to the nuclear agreement. In July 2008, the government won the vote of confidence. Two years later, the Indian Parliament passed the Civil Liability for Nuclear Damage Act, legislation specifying who would be liable in the event of a nuclear accident. However, U.S. discomfort with the law ended up stalling the deal's implementation for several years.

4.8: “U.S. Perspectives on the Indo-U.S. Nuclear Deal”

- Jeffrey Lewis: 00:05 Since India had a nuclear weapons program and tested nuclear weapons in 1974 and 1998, India was not eligible for nuclear cooperation under the Atomic Energy Act with the United States. There are very stringent nonproliferation requirements for nuclear cooperation in anything called a 123 agreement, which is the peaceful nuclear cooperation agreement named after Section 123 of the Atomic Energy Act. The Bush administration reached a conclusion that India would not ever give up its nuclear weapons and would not ever sign the NPT, and so they decided that it was better to get some of India's nuclear facilities under safeguards and try to improve the relationship with India by engaging in peaceful nuclear cooperation. So the Bush administration pressed Congress to pass something called the Hyde Act, which allowed it to then go and negotiate a peaceful nuclear cooperation agreement with India. As I say, the argument in favor of this was that the United States needed a strong strategic relationship with India and there was no reason to continue to isolate India because it was never going to give up its nuclear weapons. Opponents of the agreement argued that it set a terrible precedent because it allowed India to have nuclear weapons and get all the same benefits of peaceful nuclear cooperation that a state would normally get for entering the NPT as a non-nuclear weapons state. Opponents are also worried about something that we started to see lately, which is now Pakistan and Israel think that they are entitled to a very similar agreement.
- Dan Markey: 01:24 The United States, when considering a nuclear deal with India, really was, I think, motivated principally by a much broader strategic set of issues, less to do with nuclear issues per se and more to do with geopolitics – emerging geopolitics of Asia and of the world. What I mean by that, and I have some recollection of this having worked at the State Department during this period, what I mean by that, is that U.S. policymakers were looking at India and seeing it as a plausible, perhaps even an ideal, Asian partner in dealing with the rise of China and the shift of global power into Asia. The question in many of those policymakers' minds was, what was blocking India from being a better partner to the United States? Or putting it in a different way, how could the United States break through with India? And one of the answers to that question was that we needed to get past some of the old baggage in the relationship, and a chief piece of that baggage was the United States' long-standing, effectively, denial of India's access to nuclear technologies and a desire on the U.S. part, over several administrations, to keep

India out of the nuclear club. And within the Bush administration, there was a determination that in order to break through with India, this had to change. And that led to a series of negotiations that were principally, again, geared to the civilian nuclear side of India's program. Not a desire to enhance military nuclear capabilities on India's side, but a desire to change the storyline in the U.S.-India relationship, to stop denying India access to those sorts of technologies, and then to do so in a way that, at least by calculations within the administration, would not have grave implications for the strategic balance between India and Pakistan. So those are the basic calculations. Think about how to break through with India and how to do so in a way that wouldn't have major material consequences for the military balance.

- Ashley Tellis: 03:38 The United States pursued this deal with India for two reasons. One, because there was a huge level of comfort with India as a fellow democracy, and there was a desire to cement a relationship between the United States and India at the level of shared values and shared political commitments. The second reason had to do with maintaining a balance of power in Asia, which would enable the United States to manage China's rise, and India was seen as very critical to that process, and getting rid of the outstanding obstacles in the bilateral relationship, especially the nuclear disagreement, was critical to making that happen.
- Robin Raphel: 04:25 Congress realized that the world had changed here, and that India was an important emerging power. The Cold War was over. India's ties to the Soviet Union, which in effect no longer existed, wasn't the issue that it used to be. India was reforming economically, there were business opportunities there, and they had the potential to serve as a balance to an emerging China, and so on. So Congress decided, and they also had some pressure from the India lobby, the growing Indian diaspora community, which was very politically active. So they decided it just wasn't wise to jeopardize our broader interests in pursuit of a goal that was unattainable. You know, the cat was out of the bag, the genie was out of the bottle. Pakistan and India had both tested nuclear weapons.
- Anish Goel: 05:28 I think people often forget how highly controversial the deal was, not only in India, which is a well-known story, but in the United States as well. I mean, this was breaking a lot of crockery. It was changing 35, maybe 40, years of U.S. policy that had been consistent over administrations of both parties for a long time, since the early 1970s. So when this was proposed, it really turned everything on its head, and this actually cracked

the government in half in terms of people who supported it and people who opposed it. There were, of course, people like myself who were in the more regional side of the government, those of us who worked on South Asia, and worked on the U.S.-India relationship, were strongly in favor of it for the strategic rationales that I described earlier. But there was an equal number of people in the nonproliferation side of the House that were equally opposed to it because it overturned 35 years of nonproliferation policy, and to a lot of people, this represented sort of a threat to the global nonproliferation framework that they had worked so hard to build over the last 40 years. So it was a big fight within the government, and it wasn't always a sure thing that this would happen. There were a number of times when I personally thought that it might not happen because there was so much opposition to it. I will say that, in my belief, the only way that this deal got done in the end was with the strong leadership of the president, the secretary of state, and the national security advisor at the time. They made it clear that this is something that they wanted to do, and that this is something that we had to try everything – we had to give it our all and try everything that we could, make every attempt to get this thing done. And they provided leadership when it counted, you know, when it came down to the end game with the Indian government, the folks at the very top were very instrumental in getting it done. When it got down to pushing legislation through Congress to allow for this to happen, the folks at the top really helped and put in the time and effort needed to get it done, and when it came to negotiating at the Nuclear Suppliers Group to get 45 other nations to grant this exception for India, it was the leadership going all the way up to the president that finally got that done.

Cindy Vestergaard: 07:59

The safeguards agreement that India has with the International Atomic Energy Agency is one that expands, certainly, the facilities' materials that are under international safeguards in India. It went from initially ten facilities in 2008, and now 22 facilities have been added. So it's in the umbrella agreement where India can keep adding facilities to it. In terms of the scope, it has increased over the past decade, over its first eight years in existence. The challenge with it is that not all facilities are encompassed, certainly not the military ones. India acts like any other nuclear weapons states in the relationship with the IAEA on its safeguards agreements. But there are nuances in the sense that any imported nuclear material, for example, yellowcake going into India, has to be under international safeguards. So even if it moves into facilities where it falls under temporary safeguards, it still must be reported to the IAEA. But for many critics, the biggest detriment or weakness of the

safeguards agreement with India is that materials can move outside of facilities that are safeguarded to temporary, or under temporary safeguards.

Leonard Spector: 09:20 The concern that many of us had about the India-U.S. nuclear deal was that it would erode the one restraint that really applied, across the board, to all of the would-be or actually emerging nuclear powers. And that was, there would be no commerce, no support for civil nuclear programs. These countries weren't subject to economic sanctions. They weren't being isolated internationally, and I'm including Israel in this group. There were simply being frozen out of this one sector. And I thought that was an appropriate type of restraint.

Toby Dalton: 09:56 In terms of nonproliferation, we see some responses to the deal, particularly from Pakistan, that suggest it has not been positive for nonproliferation, and indeed has created some challenges. On the other hand, we see that more Indian facilities are now under IAEA safeguards, and that there is a sense that its nuclear program is not growing or doesn't have the same kind of ambition that many had suspected it might before, and that over the long term, India's engagement with the Nuclear Suppliers Group and in the global nuclear order, its participation in nuclear governance, is better for the regime in the long run. So I think a mixed picture there. In terms of the economics, the Indian nuclear energy program is growing, but not at a pace that some people had predicted or had hoped, and the U.S. firms haven't yet really specifically benefited from it. That may change over time, and there's an agreement between Westinghouse and India in the works under which Westinghouse would build several reactors in India. Yet ten years of effort to try to make this into a reality shows how difficult it is and suggests also that the longer term promise of hundreds of U.S. jobs and billions of dollars in nuclear trade probably were overblown. And then finally, in terms of the strategic significance of the deal, I think we see there that the claims and the hope that India would emerge as this strategic, peer to China certainly have not yet come to pass. It also seems to be clear that that wasn't something that Indians had signed up to. That was an American aspiration for the deal that India probably wasn't fully in line with. In particular, it's clear that India is seeking a place in its neighborhood and a policy with China that builds on the trade relationship, seeks to have stable political relations, and builds India's role in the region and indeed as a global power, as a goal in and of itself. So there are questions in India about the extent to which alignment with the United States is something that continues to be good. There's a growing defense partnership, but that is not yet at the same as a strategic partnership, in which there is substantial overlap of interests and goals. So, I think the jury there is still a little bit out too.

4.9: “Indian Perspectives on the Indo-U.S. Nuclear Deal”

- C. Raja Mohan: 00:05 I think it was a great debate. It probably was one of the most consequential foreign policy debates that India had seen for many, many years. I think there are essentially two sets of issues in the debate. One was, what does this nuclear initiative mean for the U.S.-India relationship? And second, what does it mean for India's nuclear program, both civilian and military? On the question of the U.S.-India relationship, those who are skeptical said, “Look, this is actually about drawing India into a subordinate relationship with the United States.” Those who are supporting said that, “Look, this is about actually removing the accumulated distrust between the two countries and about liberating the relationship from the problems that the nuclear issue posed.”
- Rakesh Sood: 00:51 These were difficult negotiations. There was many a point where sections of the Indian strategic community wondered what exactly the U.S. purpose was, because there were statements that would come out occasionally from certain sections in Washington, which would talk about capping and rolling back India’s nuclear program. Now, it was very clear that that was not something which we were looking for in this bilateral agreement. What we were looking for was a recognition of India as a responsible nuclear weapons state, and looking for participation in terms of normal civilian, international trade and commerce in the nuclear sector.
- Sheel Kant Sharma: 1:38 The nuclear deal, which was pursued with great vigor, I was personally involved with that, by the BJP government between '99 and 2004, was then when Congress government started pursuing it between 2005 and 2010. There was a lot of opposition in the Parliament, and it was scrutinized in great detail. So, then you had the nuclear liability regime, which was brought into picture. All these issues, somehow or other, have catapulted nuclear matters to everyone's attention.
- Shyam Saran: 02:19 The negotiating process between India and the U.S. was unfamiliar to both sides, so the negotiating process was also a learning process between the two sides. You know, the U.S. is used to dealing with allies. It is used to dealing with adversaries. It finds it rather difficult to deal with partners. On the Indian side, for a very large number of years, India was at the receiving end of technology denial regimes or sanctions on the part of the United States on its nuclear program, on its space program, on its defense research and development program. So, for those who were in those sectors of the Indian system and who were

the receiving end of these U.S. sanctions, for them to begin to accept that the U.S. was now going to be a partner was a difficult thing to do. So bringing about a change in these perceptions on the Indian side was difficult. I suspect that it was similar on the U.S. side as well. Many in the U.S. felt, "Why should there be an exception of this kind made for India?", especially when they felt that this could impact the international nonproliferation regime. The second issue is related to this, which is that, on the Indian side, in order to sell this to the Indian public, to the Indian Parliament, one had to argue that there was nothing in this deal which in any way constrained India's strategic nuclear program, that this was all about civil nuclear cooperation. It had nothing to do with India's strategic program and that program would remain intact and would continue according to India's own requirements. On the U.S. side, on the other hand, the way to get public opinion behind this deal was that here was something which will not undermine the nonproliferation regime, that in a sense, bringing India into the tent would strengthen the nonproliferation regime, not undermine it. So we were coming somewhat from two different directions to try and get this deal accepted politically. We became aware of the fact that unless we took the U.S. Congress on board, it would be difficult to get this deal through. So for the first time, I myself was foreign secretary, I was making the rounds on Capitol Hill, meeting U.S. House of Representative members, U.S. senators, arguing India's case, trying to convince them why this was important. This was something that we had never done before. Similarly, you know, mobilizing opinion within the Indian community in the United States of America, recognizing that they had become an influential political force, and they could help us in getting that support for the deal, and we worked very hard with them as well. So there were some unfamiliar things that we did which were complex, which were difficult, but ultimately were very helpful in getting the deal through.

Sheel Kant Sharma: 05:28

India's safeguards agreement which exists today was concluded in 2008. The driving force behind this agreement, this comprehensive agreement, was the Indo-U.S. Nuclear Cooperation Agreement, under which India agreed to separate its nuclear facilities into civilian and strategic. And all of its civilian facilities were placed under safeguards, under a particular schedule. So under that schedule, 14 out of 22 nuclear power reactors were put under safeguards.

4.10: “Pakistani Perspectives on the Indo-U.S. Nuclear Deal”

- Touqir Hussain: 00:06 Initially, the reaction was not directly oppositional to the agreement. Pakistan was, of course, concerned as to its implications, but was hoping that it would get a similar agreement with the United States. And when that was denied, then Pakistan's reaction to the U.S.-India nuclear deal completely changed. It felt that as if it was purposely meant to sort of accept India's nuclear program, but to deny Pakistan, and that sort of exacerbated fears and anxieties in Pakistan about whether the United States is prepared to live with Pakistan's nuclear program or not. And these anxieties were particularly exaggerated when the American media started writing about the safety of these nuclear sites and the risk of them falling into radical hands.
- Feroz Khan: 01:01 I believe that Pakistan was made to believe, or they had calculated, that if India's exceptional deal would happen, something of Pakistan's turn may come a little later, because the timeframe in which the deal was being negotiated was too close to the AQ Khan nuclear network controversy, and Pakistan was in the dark. But around the period, about 2010 and '11, is the timeframe when Pakistan became a very angry about this deal; they started calling discrimination and victimization around that timeframe, which seems to suggest to me that something went wrong, that they believed that the United States is no longer interested in giving Pakistan the same treatment.
- Riaz Khan: 01:54 Pakistan, first of all, felt concerned that this nuclear deal will allow India to produce fissile materials for military purposes. It will enhance its capacity because eight nuclear power plants in India were outside IAEA safeguards, and there was little that was done to see that they do not continue to produce fissile material which can be used for military purposes. We are opposed to, we avoid, a nuclear arms race because we cannot simply afford it. But then if the fissile material at the disposal of India continues to pile up, then naturally, Pakistan will have to also enhance its own capabilities. The second aspect was that at that time, Pakistan said that “While we do not want an arms race, etc., we have an interest in nuclear power generation and we should also have access to nuclear technology and safeguards.” Lastly, we were concerned by the very fact that it had a discriminatory element. It said that India has a different history, Pakistan has a different history, so what is allowed to India cannot be allowed to Pakistan.

Zamir Akram:

03:36

This agreement or this opportunity that has been offered to India has led them to forgo or to actually reject any dialogue with Pakistan on nuclear issues. As I was saying earlier on, after the 1998 tests, Pakistan and India, which were being treated equally by the international community in terms of the program, we had a productive dialogue, India and Pakistan ending up in the Lahore Agreement. But after 2008, when this waiver was given and this agreement was signed between Indians and the United States, there is absolutely no willingness on the part of the Indians to engage with Pakistan on these kinds of issues. And that's dangerous because we're not even talking about marginal confidence-building measures, let alone efforts to stabilize the security environment in Asia.

4.11: “The Origins and Role of the Nuclear Suppliers Group (NSG)”

- Robert Einhorn: 00:10 India's test in '74 was really a wake-up call to the international community that it was important to take nonproliferation more seriously. You had the Nuclear Non-Proliferation Treaty, which had only entered into force in 1970, so it was fairly new and undeveloped. It had to be supplemented by a variety of measures that were stimulated by the Indian test. For example, the Nuclear Suppliers Group was a direct result of the Indian test. India had violated its commitment to use nuclear materials imported only for peaceful purposes. It didn't fulfill that commitment. So the Nuclear Suppliers Group was going to adopt stronger multilateral export controls and assurances about conditions of supply to make sure that suppliers would insist on tough conditions, and the recipients of nuclear technology would not engage in the kind of activity India had.
- Mark Fitzpatrick: 01:26 The Nuclear Suppliers Group has been one of the institutions that both India and Pakistan have regarded as preventing them from being a normal nuclear-armed state. It's a club. They see it as a cartel and they used to disparage it quite strongly, India in particular, but both want to be members of this club that they formerly disparaged, and India is closer to becoming a member because as part of the 2005 nuclear deal between India and the United States, the United States undertook to try to bring India into the club. But Pakistan, quite rightly, argues that if India were allowed in, that would probably foreclose any chances of Pakistan also becoming a member of the Nuclear Suppliers Group, because membership is based on a consensus of existing members. And once India became a member, if they did so before Pakistan, they would probably see to it that Pakistan was not admitted for the foreseeable future.
- Instructor: 02:47 The NSG remains an important institution in the global nonproliferation regime. Membership consists of 48 participating governments, or supplier states. The group works on the basis of consensus, to create guidelines that set the rules of the road for international nuclear trade. The guidelines aim to ensure that nuclear trade for peaceful purposes does not contribute to the proliferation of nuclear weapons, while also ensuring that cooperation in the nuclear field is not hindered unjustly in the process. NSG guidelines are implemented by each participating government in accordance with its own national laws and practices. There are three reasons why India and Pakistan are seeking NSG membership: influence, technology, and geopolitics. First, the NSG makes the rules of the road for nuclear trade and nonproliferation. Membership

makes it easier for states to influence international norms consistent with their national interests. Second, NSG members are able to import and export high-level nuclear technology that non-members are not. Membership is essential to building a first-rate nuclear program. Finally, NSG membership confers prestige and influence in the international system. Since new members are admitted by consensus, the first country to join the NSG would have the ability to deny membership to the other. Pakistan is particularly concerned that its chances to join the NSG would be curtailed if India gained membership first.

4.12: “India, Pakistan, and NSG Membership”

- Michael Krepon: 00:08 India wants NSG membership for a couple of reasons. Number one, to clarify that it is indeed a member of the club. That it has a seat at, at least, this high table, if not other high tables. So, prestige is a part of it. Influence is a part of it. It's another reason. India wants to be part of a decision-making process, with respect to states that may follow, like Pakistan. India complains that the institutions of the so-called global nuclear order have been imposed on them. China makes the same argument. Now India wants to be part of the decision-making process. So that's the second reason. I think a third reason is that there is still some technology denial with respect to India that India doesn't like. So when the Congress approved the Civil Nuclear Agreement with India, it excluded transfers for reprocessing and enrichment because of proliferation concerns. And India is still chafing against these few remaining barriers to technology transfer.
- Rakesh Sood: 01:46 We are not a member of the Nuclear Suppliers Group, but we have built up a very credible export control system which is in harmony with the Nuclear Suppliers Groups restrictions. And we remain in dialogue with the NSG, with regard to India's membership.
- Rajeswari Rajagopalan: 02:02 The issue is more in terms of political, in nature, whether countries should support India's candidature into these export control regimes. Whether you have, for instance, one of the countries, in our neighborhood, China, has a veto power, but also you have issues coming from some of the East European countries, smaller European countries who have looked at nonproliferation in a very strict manner where India's non-membership of the Nuclear Non-Proliferation Treaty is being seen as a critical issue. It is true, India is not a signatory to the NPT, but India has adhered to all the principles that enshrine the treaty, in a sense. India has not signed this for a variety of historical reasons, which I don't want to get into at this point of time, but having abided by every single principle and idea behind the NPT, I think its nonproliferation track record stands to India's credibility in this regard. And I think this is something that has kind of favored India's exception of the NSG, the Nuclear Suppliers Group, the waiver for India, special waiver for India, following the U.S. and the nuclear agreement.
- Ruhee Neog: 03:21 Many believe that this is for nuclear commerce. I don't think that's the priority issue for India seeking membership into the NSG. India has several bilateral civilian nuclear agreements in

place already. So, I think that what the NSG will grant it is slightly greater access, but the issues that really trump this particular advantage of nuclear commerce: first, that as an insider, as a participating government in the NSG, India can effectively play a role in the consensus process that makes amendments to the guidelines of the NSG. As an outsider, it has obviously no saying this process whatsoever. Another important point is that, of course, it has the 2008 waiver regarding nuclear exports. It is possible, it is worth considering, that this could be overturned or reversed in some manner at a later stage. If India were to be a part of the NSG, perhaps now or in the future, what it could do was obviously put any notions of reversing this judgment aside.

Zamir Akram: 04:45

NSG, as an organization, was created in 1974 after the Indian nuclear tests. And now we believe that some countries that are advocating Indian membership of the NSG is somewhat controversial, to put it mildly, because they would like this organization that was created as a result of the Indian nuclear tests to embrace that very country. There are certain criteria that need to be met that have been identified by the NSG members, and some countries are arguing that India does not meet that criteria. Some countries like mine, Pakistan, argue that if an exception has to be made, then it should be made for everyone who is in the same category of being a nuclear weapons state but not a party to the Non-Proliferation Treaty.

Riaz Khan: 05:38

A criteria-based approach should be: one, you have to look at the export control systems and how well they are being implemented by the country. First, are they up to these international standards, and secondly, how are they being implemented? This should be the first requirement. Secondly, the willingness of the country to be cooperative in international endeavors, both with regard to the peaceful uses of nuclear energy. Here, the role within the IAEA is very important. Are all our civilian nuclear programs under the IAEA?

4.13: “Assessing India and Pakistan's NSG Chances”

- Cindy Vestergaard: 00:09 The Indians did take a reactor provided by Canada and heavy water from the United States, and from that reactor, they produced the plutonium that was used in their explosive device in 1974. So in that way, India did sign a clause that it would use the technology for a peaceful purposes. India did say that the explosion in 1974, the Smiling Buddha, was a “peaceful nuclear explosion.” Canada, however, did not differentiate between nuclear weapons and nuclear explosive devices, whether peaceful or military, and stopped or suspended cooperation. So, the result of that explosion of 1974, I think, indicates that from the Canadian perspective, and also the U.S. perspective, that there was proliferation concerns. India's overall record, in terms of not actually proliferating horizontally to other states or non-state actors, is certainly a record that is there. In terms of its own vertical proliferation, and how it got its materials and technology required, that came from abroad.
- Toby Dalton: 01:24 India's nonproliferation record is probably not as sterling as they make it out to be, and I think there are some questions, particularly if we broaden the scope to also include other concerns, such as nuclear safety. On the one hand, in terms of outward proliferation of technology or expertise, there are relatively few indications that Indian technology or expertise has gone to other countries. I believe there were a couple Indian individuals who were called out for having cooperated with Iran on some sensitive technologies, but not a wholesale record that would indicate some state support for proliferation, and these were probably, in fact, isolated incidents. If we broaden the lens to include questions about nuclear security, there we see more questions about the extent to which India has taken specific steps in order to build its international reputation, as opposed to taking specific steps because it has become more, shall we say, like-minded on nonproliferation and nuclear security. I think what we see is a resistance in the Indian scientific community to adopt more transparency or to apply IAEA safeguards to additional facilities, in large part because there's a belief that that would somehow inhibit their scientific work. Yet, that suggests that they don't value the nonproliferation norms and benefits that come with those kinds of enhanced transparency measures.
- Leonard Spector: 02:58 The prospect of India and Pakistan joining the NSG together is probably better than either one of them gaining access separately. I think the sins that have kept Pakistan out of the NSG are getting pretty old, as the Indian sin that should've kept

it out of the NSG, which was the exploitation of the reactor back in 1974. And at a certain stage, you say it's time to move on and see what we can do, but I think the Chinese factor will prevent one from getting in, that is India, without Pakistan also being invited.

- Ashley Tellis: 03:39 There are several impediments to Pakistan's membership in the NSG. First, there is still an unsettled record about Pakistan past proliferation behavior. Although Pakistan has made great advances in curbing proliferation since the days of AQ Khan, there are many countries in the NSG that are still discomfited by what Pakistan did in the past. Second, Pakistan's growing nuclear weapons program, at this point, leaves many NSG members uncomfortable because it runs counter to the global trends with respect to denuclearization. So at least on those counts, members need to be satisfied before Pakistan can be invited into full membership of the organization.
- Michael Krepon: 04:33 China argues that you got to be a member of the Non-Proliferation Treaty if you want to be a member of the Nuclear Suppliers Group as a matter of principle, and it's using this argument, among others, to keep India out. If somehow or other, India and Pakistan could get in together, my hunch is that Beijing would drop this argument. In my view, it's not a strong argument. What matters isn't whether these states belong to the NPT; they can't. There's no room for them in the NPT. What matters more is whether they adhere to the principles and standards embodied in being a responsible member of the international community.
- Zamir Akram: 05:33 Is there going to be an exception again for India? Is there going to be a new normal that has to be evolved to deal with these three countries that are nuclear weapon states but non-signatories of NPT? That's still very much out there, and it's an issue that's not yet been resolved.
- C. Raja Mohan: 05:52 In the end, the Chinese are being political. This is not about a technical argument. I mean, I think after all, China's own record is a pretty dismal one in terms of their commitment to international rules in the nuclear arena. I think for them it's a political thing that they feel that this whole India-U.S. nuclear deal was about the construction of a special relationship between Delhi and Washington.
- Ashley Tellis: 06:15 I doubt India and Pakistan have an equal chance of NSG membership, despite China's efforts to ensure that Pakistan enters the NSG at the same time as India. I think what is most likely to happen is that the NSG members will permit India to

join first, and if appropriate, enable Pakistan to join at some later point in time.

Ruhee Neog: 06:43

India's diplomacy, I think, could be considerably quieter than the sort of diplomacy it undertook through the course of this year, which was more vocal and more public in terms of quoting individual countries that are considered, or were considered, outliers. They were either on the fence or opposed to India's position. But in terms of how it is going to conduct this diplomacy, I think there could be several ways. One of which is to continue, again, in a quieter way, to court the smaller countries, and finally have China be the odd man out. And I'm not sure, though, whether this approach would force China's hand, even if it is completely isolated from everyone else. The second way to do this would be to convey to China in very clear terms that this will have negative consequences for the bilateral relationship. Again, going by how India has behaved in the past and demonstrations of its bilateral conduct with China, I think this is not the route that India will take. And the third way is to reduce its investment in the NSG and not seek it with the same enthusiasm that it has done in the recent past.

Manpreet Sethi: 08:00

Technically, there is no objection that can hold water that China has put to India's membership, but certainly we see it as a political power play here, and I would suggest three ways in which India can get over these objections. One, of course, is for India to use every opportunity and forum to delink itself from Pakistan's membership. China has tried to put Pakistan as an albatross around India's neck in terms of getting the membership, but there is no similarity between the Indian and Pakistani case, not in terms of the expanse and the level of the programs, the nuclear power programs that the two countries have, not in terms of the responsibility of behavior that the two countries have shown, not in terms of the kinds of nuclear industries, domestic nuclear industries, that exist in India and Pakistan. So there is no similarity here except for the fact that the two countries are non-NPT members, but that's where the similarity ends. So this delinking of India and Pakistan is, I think, the first step that we must take. At another level, India must improve the nature of its nuclear power program that seems to have taken a beating after Fukushima. Public acceptance issues and the nuclear liability law that India enacted somehow took away the sheen of the potential of the Indian nuclear market. So once that becomes attractive again, it will smooth the way to NSG membership. And thirdly, of course, I think if we can find a way of leveraging our relationship with China, particularly for instance, in terms of improving civilian nuclear cooperation with China. If there were, you know, nuclear reactors that could be

brought into India based on the proper bid, the manner in which other plants come in. And also if we could have joint ventures with China on manufacturing of certain kinds of equipment, it would provide a certain leverage of a relationship between India and China. So that's another way in which we could get over some of the obstacles that China has in terms of India's membership.