

# Peace NOW!



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The Bulletin of the Coalition for Nuclear Disarmament & Peace

## EDITORIAL

It was only on Jan 14 last the "Doomsday Clock was set back one minute, from 11:55 to 11:54, reversing a precipitous slide toward midnight, the zero hour, ultimate self-destruction." The resetting of the Clock evidently was triggered by and meant to capture the mood of optimism caused by US President Obama's call from Prague for a "world without nuclear weapons" on April 4 last year and commencement of the START negotiations between the US and Russia and also the United Nations Security Council (UNSC), on September 24 last, passing the Resolution 1887 with the same Obama in driver's chair.

Not even a month has elapsed since the rather small but still significant resetting. Yet the mood has again started souring. The tension with Iran is slowly peaking notwithstanding some confusing and conflicting signals. Even the START negotiations, after a promising start, remain somewhat bogged down and seem to have lost the initial momentum. The US Ballistic Missile Defence programme, on the European soils in particular, has turned out to be the major nagging point. President Obama's apparent lack of handle over the legislative process conducted by the US Congress is seriously undermining the credibility of his whatever commitments. And, Russia's just released new military doctrine identifies NATO and the US as the main sources of security threats. As many as seven out of total 11 external military threats listed out by the new doctrine are traced to the West. That's evidently not too reassuring. Not only that, on top of all

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these, the Obama Administration in its budget proposal has asked for the biggest raise in the recent years for spending on its warhead programme. And the Vice President Joe Biden has presented a nuclear vision which runs just counter to the vision of a world without nuclear weapons. Whatever be the compulsions and calculations, that's pretty disturbing.

Nevertheless the momentum for peace and global nuclear disarmament, which is by no means exclusively dependent on Obama and his moves and mood, and also fortune, swings, has picked up a bit in the meanwhile. Various international networks are pulling up their socks keeping the (May) 2010 NPT Review Conference in focus, but also looking far beyond. A Nuclear Weapons (Abolition) Conference has emerged as a major rallying demand. The CNDP, in its forthcoming Tenth Anniversary celebrations from Dec. 9 - 12 later this year in Delhi, is committed to do its bit to add to this momentum.

In this current issue, we have carried a number of thoughtful articles including one giving out a brief but fairly comprehensive account of the role of the Indian state vis-à-vis moves towards global nuclear disarmament, focussing particularly on more recent developments and the Indo-US Nuclear Deal.

As regards the Indo-US Nuclear Deal itself, the main barrier was crossed and a major milestone achieved with the special waiver granted by the 45-member Nuclear Suppliers Group (NSG) to enable India carry out international civil nuclear trade, denied since the first

(peaceful) nuclear explosion in May 1974 and the barrier gradually going up and up since then particularly in the wake of the five nuclear explosions in May 1992, on September 6 2008 at the end of tortuous and acrimonious deliberations marked by virtually open resort to arm-twisting of and, of course, the offer of huge lucrative deals. With the NSG waiver, doors have opened for deals with the member countries of this group on bilateral basis. The subsequent final approval of the 123 Agreement between the US and India by the US President on October 8 2008 thus became a sort of mere footnote to the whole process. As we had explicitly noted even earlier, the very tag "Indo-US Nuclear Deal", as a consequence of the NSG waiver preceded by the India-specific safeguard agreement authored by the IAEA on August 1 2008, has become largely a misnomer, unless of course applied specifically in the very restricted context of dealings between the US and India only, except for the fact that it does aptly capture the history of the whole process and the role of the US as the principal driver in ending India's more than three decades long exclusion from the international nuclear market. Since then India has inked agreements with Russia, France, the US, Kazakhstan, Mongolia, Argentina, Namibia and now Britain for nuclear reactors, components, technology and fuel.

Consequently, the nuclear power programme in the country is in for a big boost. To further facilitate the process, and possibly to open up nuclear power production to private players, a civil nuclear liability cap bill has been readied by

the Union Cabinet in a completely hush-hush manner. The CNDP has publicly registered its protests. We carry the protest letters to the Prime Minister of India in this issue along with a brief (technical) summary of the Indo-US Nuclear deal done by a "think tank" from the US.

While some further hurdles still remain before the US-based companies can actually have a piece of the Indian pie; Russia and France have forged considerably ahead. Russia is to supply additional reactors to be installed in Koodankulam. Also set up a Greenfield plant in Haripur in the Paschim Medinipur district of West Bengal. Similarly, the Areva of France is to set up a brand new plant in Jaitapur the Ratnagiri district of Maharashtra. Considerable popular resistances have been mobilised at both the sites. We carry a report on the resistance in Jaitapur/Madban.

We also carry articles on nuclear power in general and the nuclear menace in South Asia.

Before we end, we pay our sincerest tributes to Sri Harekrishna Debnath, who apart from being the all-India leader of the fishworkers - the General Secretary of the National Fishworkers Forum since 1985 and subsequently its Chairperson - was the living spirit behind the massive resistance in Haripur against the proposed nuclear power plant. Sri Debnath breathed his last, at the age of 60, in the morning of December 30th last. He had been suffering from lung cancer which was diagnosed early last year.



# A. Indo-US Nuclear Deal and Fallout: An Update

## I. The US-India Nuclear Deal

Jayshree Bajoria and Esther Pan

### INTRODUCTION

The U.S. Congress on October 1, 2008, gave final approval to an agreement facilitating nuclear cooperation between the United States and India. The deal is seen as a watershed in U.S.-India relations and introduces a new aspect to international nonproliferation efforts. First introduced in the joint statement released by President Bush and Indian Prime Minister Manmohan Singh on July 18, 2005, the deal lifts a three-decade U.S. moratorium on nuclear trade with India. It provides U.S. assistance to India's civilian nuclear energy program, and expands U.S.-India cooperation in energy and satellite technology. But critics in the United States say the deal fundamentally reverses half a century of U.S. nonproliferation efforts, undermines attempts to prevent states like Iran and North Korea from acquiring nuclear weapons, and potentially contributes to a nuclear arms race in Asia. "It's an unprecedented deal for India," says Charles D. Ferguson, science and technology fellow at the Council on Foreign Relations. "If you look at the three countries outside the Nuclear Non-Proliferation Treaty (NPT)-Israel, India, and Pakistan-this stands to be a unique deal."

A number of issues must be resolved before U.S. companies can start nuclear trade with India. The Indian parliament has

yet to approve legislation granting civil liability protection to U.S. energy companies. India would also like the United States to relax some of its restrictions on technology transfer to India. But India appears intent to move ahead: In July 2009, New Delhi designated two sites for U.S. companies to build nuclear reactors in India.

### What are the terms of the deal?

The details of the deal include the following:

- India agrees to allow inspectors from the International Atomic Energy Association (IAEA), the United Nations' nuclear watchdog group, access to its civilian nuclear program. By March 2006, India promised to place fourteen of its twenty-two power reactors under IAEA safeguards permanently. Teresita Schaffer, director of the South Asia program at the Center for Strategic and International Studies, says these will include domestically built plants, which India has not been willing to safeguard before now. India has promised that all future civilian thermal and breeder reactors shall be placed under IAEA safeguards permanently. However, the Indian prime minister says New Delhi "retains the sole right to determine such

reactors as civilian." According to him: "This means that India will not be constrained in any way in building future nuclear facilities, whether civilian or military, as per our national requirements." Military facilities-and stockpiles of nuclear fuel that India has produced up to now-will be exempt from inspections or safeguards.

- India commits to signing an Additional Protocol (PDF)-which allows more intrusive IAEA inspections-of its civilian facilities.
- India agrees to continue its moratorium on nuclear weapons testing.
- India commits to strengthening the security of its nuclear arsenals.
- India works toward negotiating a Fissile Material Cutoff Treaty (FMCT) with the United States banning the production of fissile material for weapons purposes. India agrees to prevent the spread of enrichment and reprocessing technologies to states that don't possess them and to support international non-proliferation efforts.
- U.S. companies will be allowed to build nuclear reactors in India and provide nuclear fuel for its

civilian energy program. (An approval by the Nuclear Suppliers Group lifting the ban on India has also cleared the way for other countries to make nuclear fuel and technology sales to India.)

### **What kind of technology would India receive in return?**

India would be eligible to buy U.S. dual-use nuclear technology, including materials and equipment that could be used to enrich uranium or reprocess plutonium, potentially creating the material for nuclear bombs. It would also receive imported fuel for its nuclear reactors.

### **What do proponents say about the deal?**

Proponents of the agreement argue it will bring India closer to the United States at a time when the two countries are forging a strategic relationship to pursue common interests in fighting terrorism, spreading democracy, and preventing the domination of Asia by a single power. Ashley Tellis of the Carnegie Endowment for International Peace—who was intimately involved in negotiating the civil nuclear agreement with India as senior adviser to the U.S. undersecretary of state for political affairs—said in congressional testimony in 2005 that the deal recognizes this growing relationship by engaging India, which has proven it is not a nuclear proliferation risk. Other experts say the deal lays out the requirements for India to be recognized as a responsible steward of nuclear power. "This is part of a process of making India a more durable and reliable

nuclear partner," Schaffer says.

### **Other experts say the deal:**

- Would encourage India to accept international safeguards on facilities it has not allowed to be inspected before. This is a major step, experts say, because the existing nonproliferation regime has failed either to force India to give up its nuclear weapons or make it accept international inspections and restrictions on its nuclear facilities. "President Bush's bilateral deal correctly recognizes that it is far better for the nonproliferation community if India works with it rather than against it," writes Seema Gahlaut of the University of Georgia's Center for International Trade and Security in a CSIS policy brief. IAEA Director-General Mohammed ElBaradei has strongly endorsed the deal, calling it a pragmatic way to bring India into the non-proliferation community.
- Recognizes India's history of imposing voluntary safeguards on its nuclear program. Proponents of the deal say India has an excellent record of setting credible safeguards on its nuclear program for the last thirty years. After the safeguards on the U.S.-supplied Tarapur nuclear facility expired in 1993, for example, India voluntarily established a new agreement with the IAEA to continue the restrictions.
- Recognizes that India has a

good record on proliferation. Although it is not a signatory to the NPT, India has maintained strict controls on its nuclear technology and has not shared it with any other country. Proponents of the deal say this restraint shows that India, unlike its nuclear neighbour Pakistan, is committed to responsible nuclear stewardship and fighting proliferation. In May 2005 India passed a law, the WMD Act, which criminalizes the trade and brokering of sensitive technology.

- Rewards India's decision to adopt similar nuclear export standards as those imposed by the Nuclear Suppliers Group (NSG). India has thus far chosen to abide by the strict export controls on nuclear technology set by the NSG, a group of forty-five nuclear-supplier states that coordinates controls of nuclear exports to non-nuclear-weapon states. Experts say if India chose to lift these voluntary restrictions, it could easily sell its technology to far less trustworthy countries around the world. The U.S. deal would reward the Indian government for its voluntary controls and give New Delhi incentive to continue them, against the demands of Indian hardliners who question what India gets out of placing such limits on itself.

### **What are the objections to the agreement?**

Critics call the terms of the

agreement overly beneficial for India and lacking sufficient safeguards to prevent New Delhi from continuing to produce nuclear weapons. "We are going to be sending, or allowing others to send, fresh fuel to India-including yellowcake and lightly enriched uranium-that will free up Indian domestic sources of fuel to be solely dedicated to making many more bombs than they would otherwise have been able to make," says Henry Sokolski, executive director of the Nonproliferation Policy Education Center, a nonprofit organization dedicated to improving awareness of proliferation issues. While India has pledged that any U.S. assistance to its civilian nuclear energy program will not benefit its nuclear weapons program, experts say India could use the imported nuclear fuel to feed its civilian energy program while diverting its own nuclear fuel to weapons production. New Delhi has done similar things in the past; India claimed it was using nuclear technology for civilian purposes right up until its first nuclear weapons test in 1974. A Congressional Research Service report (PDF) on the agreement states, "There are no measures in this global partnership to restrain India's nuclear weapons program."

#### **Other objections raised by experts include:**

- The safeguards apply only to facilities and material manufactured by India beginning when the agreement was reached. It doesn't cover the fissile material produced by India over the last several decades

of nuclear activity. The CRS report says, "A significant question is how India, in the absence of full-scope safeguards, can provide adequate confidence that U.S. peaceful nuclear technology will not be diverted to nuclear weapons purposes."

- The deal does not require India to cap or limit its fissile material production. This comes at a time when nearly all the major nuclear powers-including the United States, France, Britain, and Russia-are moving to limit their production.
- The deal does not require India to restrict the number of nuclear weapons it plans to produce.
- There are more cost-efficient ways to improve India's energy and technology sectors. These could include making India's existing electricity grid more efficient, restructuring the country's coal industry, and expanding the use of renewable energy sources, Sokolski said in congressional testimony in 2005. All these steps would involve much less dangerous transfers of technology that would not be dual-use, and therefore not convertible to nuclear weapons production.
- The agreement takes unnecessary risks without adequate preparation or expert review. The agreement "appears to have been formulated without a

comprehensive high-level review of its potential impact on nonproliferation, the significant engagement of many of the government's most senior nonproliferation experts, or a clear plan for achieving its implementation," wrote William C. Potter, director of the Center for Nonproliferation Studies at the Monterey Institute of International Studies, in *Nonproliferation Review* in August 2005. "Indeed, it bears all the signs of a top-down administrative directive specifically designed to circumvent the interagency review process and to minimize input from any remnants of the traditional 'nonproliferation lobby.'"

#### **Who needs to approve the agreement?**

The final terms of the nuclear deal were approved by the following bodies before they could be implemented:

- IAEA. India signed a safeguards agreement with the IAEA under which all nuclear material and equipment transferred to it by the United States as a part of this deal shall be subject to safeguards. In August 2008, the IAEA's Board of Governors approved an India-specific safeguards agreement (PDF). The IAEA said it will begin to implement the new agreement in 2009, with the aim of bringing fourteen Indian reactors under agency safeguards by 2014. The IAEA currently

applies safeguards to six of these fourteen nuclear reactors under previous agreements. IAEA Director General Mohamed ElBaradei says the IAEA and India are in dialogue concerning an additional protocol to the draft safeguards agreement.

- India's Parliament. While the deal does not require a formal vote by the parliament, the coalition government has faced a confidence vote over it. Many parliamentarians oppose the deal, arguing it will limit India's sovereignty and hurt its security. Some Indian nuclear experts are protesting what they see as excessive U.S. participation in deciding which of India's nuclear facilities to define as civilian, and open to international inspections under the plan.
- The Nuclear Suppliers Group. In September 2008, after much lobbying by the Bush administration, the group approved the India-specific exemption.
- Congress. In October 2008, the U.S. Congress gave final approval to the bill. Under the U.S. Atomic Energy Act, which regulates the trade of nuclear material, congressional approval was needed to pass the exemptions to U.S. laws required for the nuclear deal to be implemented. Some members of Congress were resistant, and called for India to commit to strict limits on its nuclear

weapons program before the deal went through. There is a potential area of dispute with India over the terms for suspending the agreement. Before clearing the bill, the U.S. Senate rejected an amendment that would require U.S. nuclear supplies to be cut off if India tests nuclear weapons. The deal does not explicitly impose that condition, though it is part of a 2006 law known as the Hyde Act, which gave the deal preliminary approval.

#### **What effect will the U.S.-India deal have on the NPT?**

It could gut the agreement, some experts say. Article I of the treaty says nations that possess nuclear weapons agree not to help states that do not possess weapons to acquire them. David Albright, president of the Institute for Science and International Security, says without additional measures to ensure a real barrier exists between India's military and civilian nuclear programs, the agreement "could pose serious risks to the security of the United States" by potentially allowing Indian companies to proliferate banned nuclear technology around the world. In addition, it could lead other suppliers-including Russia and China-to bend the international rules so they can sell their own nuclear technology to other countries, some of them hostile to the United States. On the other hand, experts like Gahlaut argue the NPT was already failing in its mission to prevent proliferation. She says many countries-including North Korea, Libya, Iran, and Iraq-

have cheated while being signatories of the NPT.

#### **What role does China play in the U.S.-Indian nuclear deal?**

It is a motivating factor in the deal, some experts say. China's rise in the region is prompting the United States to seek a strategic relationship with India. "The United States is trying to cement its relationship with the world's largest democracy in order to counterbalance China," CFR's Ferguson says. The Bush administration is "hoping that latching onto India as the rising star of Asia could help them handle China," Sokolski says.

Some experts say the growing economic relationship between China and India is so critical to New Delhi that its interests in China cannot be threatened or replaced by any agreement with the United States. Other experts worry U.S. nuclear aid to India could foster a dangerous nuclear rivalry between India and China. Though India has a strong interest in building economic relations with China, New Delhi is still wary of China's military rise in the region.

#### **What effect will the deal have on U.S. and Indian relations with Pakistan?**

Pakistan has not received a similar deal on nuclear energy from Washington. Some experts say this apparent U.S. favoritism toward India could increase the nuclear rivalry between the intensely competitive nations, and potentially raise tensions in the already dangerous region. "My impression is that [the Pakistanis] are worried this will feed the Indian nuclear weapons

program and therefore weaken deterrence," Blackwill said. Other experts say the two countries, both admittedly now nuclear, could be forced to deal more cautiously with each other. Pakistan is already a proliferation risk: Pakistani nuclear scientist A.Q. Khan's illicit nuclear network, revealed in 2004, shocked the world with its brazen trade of nuclear technology. Some experts worry the U.S.-India deal could prompt Pakistan to go elsewhere, for instance to China, for similar terms.

### What's the history of India's nuclear programme?

In the 1950s, the United States helped India develop nuclear energy under the Atoms for Peace programme. The United States built a nuclear reactor for India, provided nuclear fuel for a time, and allowed Indian scientists study at U.S. nuclear laboratories. In 1968, India refused to sign the NPT, claiming it was biased. In 1974, India tested its first nuclear bomb, showing it could develop nuclear weapons with technology transferred for

peaceful purposes. As a result, the United States isolated India for twenty-five years, refusing nuclear cooperation and trying to convince other countries to do the same. But since 2000, the United States has moved to build a "strategic partnership" with India, increasing cooperation in fields including spaceflight, satellite technology, and missile defense.

[Source: <http://www.cfr.org/publication/9663/>]



## Chronology of the Indo-US Nuclear Deal

**July 18, 2005:** President Bush and Prime Minister Singh first announce their intention to enter into a nuclear agreement in Washington. **March 1, 2006:** Bush visits India for the first time. **March 3, 2006:** Bush and Singh issue a joint statement on their growing strategic partnership, emphasising their agreement on civil nuclear cooperation. **July 26, 2006:** The US House of Representatives passes the 'Henry J Hyde United States-India Peaceful Atomic Energy Cooperation Act of 2006,' which stipulates that Washington will cooperate with New Delhi on nuclear issues and exempt it from signing the Nuclear Nonproliferation Treaty. **July 28, 2006:** In India, the Left parties demand threadbare discussion on the issue in Parliament. **November 16, 2006:** The US Senate passes the 'United States-India Peaceful Atomic Energy Cooperation and US Additional Protocol Implementation Act' to "exempt from certain requirements of the Atomic Energy Act of 1954 United States exports of nuclear materials, equipment, and technology to India." **December 18, 2006:** President Bush signs into law congressional legislation on Indian atomic energy. **July 27, 2007:** Negotiations on a bilateral agreement between the United States and India conclude. **Aug 3, 2007:** The text of the 'Agreement for Cooperation between the Government of the United States of America and the Government of India concerning peaceful uses of nuclear energy' (123 Agreement) is released by both governments. **Aug 13, 2007:** Prime Minister Manmohan Singh makes a suo motu statement on the deal in Parliament. **Aug 17, 2007:** The CPI(M) General Secretary Prakash Karat says the 'honeymoon (with government) may be over but the marriage can go on'. **Sept 4, 2007:** In India, the UPA-Left committee to discuss nuclear deal set up. **Feb 25, 2008:** Left parties in India say the ruling party would have to choose between the deal and its government's stability. **March 3-6, 2008:** Left parties warn of 'serious consequences' if the nuclear deal is operationalised and set a deadline asking the government to make it clear by March 15 whether it intended to proceed with the nuclear deal or drop it. **March 7-14, 2008:** The CPI writes to the Prime Minister Singh, warns of withdrawal of support if government goes ahead with the deal and puts political pressure on the Manmohan Singh government not to go with the deal. **April 23, 2008:** The Indian Government says it will seek the sense of the House on the 123 Agreement

before it is taken up for ratification by the American Congress. **June 17, 2008:** External Affairs Minister Pranab Mukherjee meets Prakash Karat, asks the Left to allow the government to go ahead with International Atomic Energy Agency (IAEA) safeguards agreement. **June 30, 2008:** The Indian Prime Minister says his government prepared to face Parliament before operationalising the deal. **July 8, 2008:** Left parties in India withdraw support to government. **July 9, 2008:** The draft India-specific safeguards accord with the IAEA circulated to IAEA's Board of Governors for approval. **July 10, 2008:** Prime Minister Manmohan Singh calls for a vote of confidence in Parliament. **July 14, 2008:** The IAEA says it will meet on August 1 to consider the India-specific safeguards agreement. **July 18, 2008:** Foreign Secretary Shivshankar Menon briefs the IAEA Board of Governors and some NSG countries in Vienna on the safeguards agreement. **July 22, 2008:** Government is willing to look at "possible amendments" to the Atomic Energy Act to ensure that the country's strategic autonomy will never be compromised, says Prime Minister Singh. **July 22, 2008:** The UPA government lead by Manmohan Singh wins trust vote in the Lok Sabha in India. **July 24, 2008:** India dismisses warning by Pakistan that the deal will accelerate an atomic arms race in the sub-continent. **July 24, 2008:** India launches full blast lobbying among the 45-nation NSG for an exemption for nuclear commerce. **July 25, 2008:** IAEA secretariat briefs member states on India-specific safeguards agreement. **Aug 1, 2008:** IAEA Board of Governors adopts India-specific safeguards agreement unanimously. **Aug 21-22, 2008:** The NSG meet to consider an India waiver ends inconclusively amid reservations by some countries. **Sep 4-6, 2008:** The NSG meets for the second time on the issue after the US comes up with a revised draft and grants waiver to India after marathon parleys. **Sept 11, 2008:** President Bush sends the text of the 123 Agreement to the US Congress for final approval. **Sept 12, 2008:** US remains silent over the controversy in India triggered by President Bush's assertions that nuclear fuel supply assurances to New Delhi under the deal were only political commitments and not legally binding. **Sept 13, 2008:** The State Department issues a fact sheet on the nuclear deal saying the initiative will help meet India's growing energy requirements and strengthen the non-proliferation regime by welcoming New Delhi into globally accepted nonproliferation standards and practices. **Sept 18, 2008:** The Senate Foreign Relations Committee kicks off a crucial hearing on the Indo-US nuclear deal. **Sept 19, 2008:** America's nuclear fuel supply assurances to India are a "political commitment" and the government cannot "legally compel" US firms to sell a "given product" to New Delhi, top officials tells Congressional panel. **Sept 21, 2008:** US financial crisis diverts attention from N-deal as both the Bush Administration and the Congress are bogged down over efforts to rescue bankrupt American banks. financial crisis in the country. **Sept 26, 2008:** PM Singh meets President Bush at the White House, but were not able to sign the nuclear deal as the Congress did not approve it. **Sept 27, 2008:** House of Representatives approves the Indo-US nuclear deal. 298 members voted for the Bill while 117 voted against. **Oct 1, 2008:** Senate approves the Indo-US civil nuclear deal with 86 votes for and 13 against. **Oct 4, 2008:** Secretary of State Rice visits Delhi. India and the US unable to ink the nuclear agreement with New Delhi insisting that it would do so only after President Bush signs it into a law, an occasion when it expects certain misgivings to be cleared. **Oct 4, 2008:** White House announces that President Bush will sign the legislation on the Indo-US nuclear deal into a law on October 8. **Oct 8, 2008:** President Bush signs legislation to enact the landmark US-India civilian nuclear agreement. **Oct 10, 2008:** The 123 Agreement between India and US is finally operationalised between the two countries after the deal is signed by External Affairs Minister Pranab Mukherjee and his counterpart Secretary of State Condoleezza Rice in Washington D C.



## II. CNDP Appeals to Prime Minister against the Proposed Civil Nuclear Liability [Cap] Bill

1.

To

Dr. Manmohan Singh  
Hon'ble Prime Minister,  
Government of India,  
South Block,  
New Delhi

Sub: Appeal against the Proposed Civil Nuclear Liability [Cap] Bill

Respected Sir,

We, the undersigned, on behalf of the Coalition for Nuclear Disarmament and Peace (CNDP), hereby express our grave concern that though media reports as regards the above Bill are regularly making rounds for quite a while, there is as yet no official word on it despite its profound likely implications.

We would, in this context like to put on record, our strong apprehensions that the proposed Bill is meant to open the Indian nuclear market for the US companies at the cost of the potential Indian victims of an accident, which by definition can neither be predicted nor completely avoided, and common Indian taxpayers.

We would also like to record our strong objections to any move to bring in private players as "operators" in the arena of nuclear industry, as this would further escalate the probabilities of catastrophic accidents (something like Chernobyl on April 26 1986) and surely raise the levels of routine hazards as private operators would be essentially propelled by profit making motive constantly inducing them to cut corners as regards "safety". A regulatory mechanism would at best mitigate but can by no means eliminate that innate tendency. And, considering the uniqueness of nuclear industry in terms of its devastation potentials, this is a road that we must not travel.

We do, hence, strongly urge that the draft Bill after tabling before the Parliament ought to be referred to the appropriate Standing Committee and the Standing Committee must initiate the process of larger public consultations, as in case of the Communal Violence Bill 2005 for example, involving all stakeholders. Under no circumstances it be hurriedly passed as in case of the SEZ Act 2005 or the UAPA Act 2008. That would be against the very grain of Indian democracy given the deep and widespread concerns as regards the said Bill.

Hope you would give due consideration to our appeal.

Yours sincerely,

Achin Vanaik  
J Sri Raman  
N D Jayaprakash  
Sukla Sen  
Anil Chaudhury  
15 12 2009

Cc:

Smt. Sonia Gandhi  
Chairperson,  
United Progressive Alliance,  
28 Akbar Road, New Delhi

2.

To  
Dr. Manmohan Singh  
Hon'ble Prime Minister,  
Government of India,  
South Block, New Delhi.

Sub: Appeal against the Proposed Civil Nuclear Liability [Cap] Bill

Respected Sir,

We, the undersigned, on behalf of the Coalition for Nuclear Disarmament and Peace (CNDP), note with some satisfaction that, despite motivated media leaks and rumours doing regular rounds, the proposed Bill has not been placed before the Parliament in the just over Winter Session.

In this context, in continuation with our earlier appeal handed over to your goodself on December 15 last, we would like to further request you that no attempts ought to be made to bring the proposed Bill into force via the Ordinance route as the Parliament now stands prorogued till the forthcoming Budget Session. That would be a travesty of democratic principles. So we again urge that your government must not proceed with the Bill without larger and open consultations with the Indian people, all the stakeholders.

A copy of our last appeal is annexed herewith for your kind reference in this regard.

Hope you would give due consideration to our appeal and confirm acceptance.

Yours sincerely,

Praful Bidwai  
Achin Vanaik  
J Sri Raman  
N D Jayaprakash  
Sukla Sen  
Anil Chaudhury

21 12 2009

Cc:  
Smt. Sonia Gandhi  
Chairperson,  
United Progressive Alliance,  
28 Akbar Road, New Delhi

## B. Nuclear Menace and South Asia

### I. India and Pakistan: Cold Start for the Hottest War?

J Sri Raman\*

WE have all been witness to a long and continuing war of words between New Delhi and Islamabad ever since the Mumbai terrorist strike of November 2008 disrupted the India-Pakistan "peace process" and "composite dialogue" which had kept going until then despite smaller problems and provocations. These statements and counter-statements, however, do not constitute the exchange that should cause the most serious concern over peace in South Asia.

A larger and direr threat is what a strangely less-noticed debate between the military establishments of the two countries presents. The chiefs of the two armies and security experts on both sides, besides others in either distinguished uniform or defense-related positions of prominence, have been engaged in the debate where a nuclear war is treated in mind-numbingly matter-of-fact terms.

It all started with a statement on November 23, 2009, by India's Chief of Army Staff Gen. Deepak Kapoor, which deserved a much wider notice than it received. He told a seminar in New Delhi: "The possibility of a limited war under a nuclear overhang is still a reality, at least in the Indian sub-continent."

He followed this up with public observations on December 29, 2009, about a plan to "launch self-contained and highly-mobile 'battle groups,' adequately backed by air cover and artillery fire assaults, for rapid thrusts into enemy territory within 96 hours." The reference was to the "cold start" military doctrine, reportedly first propounded by the Indian army in 2004 and fine-tuned subsequently. The doctrine for a "limited war" - something "short of a nuclear war" - has triggered a debate that actually raises again the prospect of the most dreaded of conflicts between the close neighbors.

Details of the doctrine make it clear that it is designed to promote war by countering Indian democracy and international peace initiatives. India's security analyst Subhash K. Kapila - who describes the doctrine as "a blitzkrieg-type strategy" to be pursued through "integrated battle groups" drawn from all the three wings of the armed forces - puts these objectives in other words.

In a paper titled "India's new 'cold start' doctrine strategically reviewed," Kapila notes that the doctrine, which says goodbye to weeks-long "military mobilization," will not only retain the surprise element in the offensive. It will also serve two other purposes.

In the first place, it will "compel the political leadership to give political approval ab initio and thereby free the armed forces to generate their full combat potential from the outset." The government is required to give the army a blank check, so to speak. Long mobilization "gives the political leadership in India time to waver under pressure, and in the process deny Indian Army its due military victories." Secondly, lengthy preparations also allow time for "Pakistan's external patrons ... to start exerting coercive pressures and mobilizing world opinion ..."

The analysis makes it clear that the doctrine will demand a new degree of militarism of India's political leadership. The strategy can succeed, Kapila points out, only if New Delhi has the "political will to use offensive military power" and "pre-emptive military strategies," the "political sagacity to view strategic military objectives with clarity" and the "political determination to pursue military operations to their ultimate conclusion without succumbing to external pressures."

Last, but certainly not the least, condition for the success of the strategy will be what Kapila calls the "political determination to cross [the] nuclear threshold if Pakistan seems so inclined." The paper notes: "Pakistan has declared that it will go for nuclear

strikes against India when a significant portion of its territory has been captured or likely to be captured, ... when a significant destruction of the Pakistani military machine has taken place or when Pakistani strategic assets (read nuclear deterrents) are endangered." Offensives under the doctrine will not allow "Pakistan to reach the above conclusions."

What about the dreadful possibility that Pakistan does reach such a conclusion, even if by mistake, and responds with a nuclear strike? The analyst provides the answer implicit in the doctrine: "Pakistan cannot expect that India would sit idle and suffer a Pakistani nuclear strike without a massive nuclear retaliation." As the paper elaborates, "Pakistan's external strategic patrons can coerce or dissuade both sides to avoid a nuclear conflict, but once Pakistan uses a nuclear first strike no power can restrain India from going in for its nuclear retaliation and the consequences for Pakistan in that case stand well discussed in strategic circles. Pakistan would (be) wiped out."

Pakistani responses have been prompt and even worse than predictable. General Deepak's counterpart, Pakistan's Chief of Army Staff (CoAS) Ashfaq Pervez Kayani charged India with "charting a course of dangerous adventurism whose consequences can be both unintended and uncontrollable." As Pakistan's peace activist Zia Mian put it: "In other words, Pakistan was threatening to use nuclear weapons if India tried to carry out the kind of conventional attack it has been rehearsing."

The civilian-military National Command Authority (NCA) of Pakistan, meeting under Prime Minister Yousaf Raza Gilani on January 13, took "serious note of recent Indian statements about conducting conventional military strikes under a nuclear umbrella" and said "such irresponsible statements reflected a hegemonic mindset, oblivious of dangerous implications of adventurism in a nuclearized context."

The NCA added: "Massive inductions of advanced weapon systems, including installation of ABMs (anti-ballistic missiles), build-up of nuclear arsenal and delivery systems through ongoing and new programs, assisted by some external quarters, offensive doctrines like 'Cold Start' and similar accumulations in the conventional realm, tend to destabilize the regional balance." Earlier, former Foreign Minister Khurshid Mahmood Kasuri took it upon himself to declare: "Pakistan's defense establishment has taken serious notice of the Indian doctrine of 'Cold Start' and all necessary arrangements have been made for an appropriate and timely response in case of any Indian misadventure."

It was left, again, to security experts to elaborate on the subject. Among these was Maleeha Lodhi, a journalist, an academic and a diplomat. A former high commissioner of Pakistan to the United Kingdom, and a former ambassador to the US, she was recently reported to be under consideration as a possible

replacement for Hussain Haqqani as the new Pakistani ambassador in Washington.

In an analysis published on January 5 in Pakistan's News International, Lodhi talks of the notion of "limited war" contained in the doctrine, and says: "It overlooks the fact that in a crisis the nuclear threshold will be indeterminate. The threshold cannot be wished away by "speed in mobilization," she said.

"In fact," she added, "the shorter the duration needed for a mobilization the greater the risk of escalation and the likely lowering of Pakistan's nuclear red lines. The long fuse in a crisis provided by the time required for assembly and deployment of forces has so far helped to avoid a catastrophic war."

Lodhi warns: "If operationalised, the 'cold start' doctrine will force Pakistan to re-evaluate its policy of keeping its nuclear arsenal in 'separated' form and move towards placing its strategic capability in a higher state of readiness, including mating warheads to delivery systems. The action-reaction cycle will move the subcontinent to a perilous state of hair-trigger alert."

The same scary prospect is raised in an article by security columnist Farzana Shah in the Asian Tribune of January 14. She writes: "(The) Indian military establishment is relying much more on President (Asif Ali) Zardari's announcement that Pakistan will not use its nuclear weapon as first strike. In reality, it is Pakistan army who will decide

which weapon is to be used when and where."

The deciding authority, Shah suggests, only makes the danger more real. She adds: "Another problem, which India is going to face during any execution of Cold Start, is the gauge of nuclear threshold of Pakistan, a point where Pakistan would decide to go for unconventional warfare.

This is where Army Chief Asfaq Pervez Kayani (has) hinted that the consequences of any misadventure in a nuclear overhang can be suicidal for India."

Anyone with any doubt about the alternative to a peace-oriented India-Pakistan dialogue needs only to listen to even a little of the debate over the cold start doctrine

and its nuclear dimension.

\* The author is a veteran journalist, author and political commentator based in Chennai. A peace activist and a National Coordination Committee (NCC) member of the CNDP.

[Source:  
<<http://www.truthout.org/india-and-pakistan-cold-start-hottest-war56204>>.]



## II. An Insecure Arsenal

**Praful Bidwai\***

**T**HE task of securing Pakistan's nuclear facilities against an extremist takeover cannot be left to the U.S. alone.

SHORTLY after India conducted a series of five nuclear explosions in May 1998, a veritable cottage industry emerged in this country purveying apologia and prejudice disguised as expert opinion on nuclear weapons policies and programmes in Asia and the world.

Entrepreneurs in this industry justified India's acquisition of a nuclear weapons arsenal on various grounds: as a defensive shield against China's nuclear weapons; a means of exploiting the last window of opportunity to conduct full-scale real-world nuclear blasts before the Comprehensive Test Ban Treaty (CTBT) eliminates that chance; and as a way of beating Pakistan to the nuclear goal-post. Was not Pakistan about to detonate blasts according to Indian intelligence reports? Would not India be

foolish to let Pakistan claim superiority in the field by going first?

The purpose of these rationalisations was to mask or deny the discontinuity that the Pokhran-II represented in India's nuclear programme. They failed to explain why India had lived in the shadow of China's bomb for more than 30 years without protesting and complaining, and how poorly the need for full-fledged tests squares up with the Indian stand at the Conference on Disarmament in 1996 that the CTBT draft is flawed because it permits non-explosive hydronuclear testing.

There were other contradictions too. However, all the explanations were unanimous on one thing: Pakistan should also conduct nuclear tests. That would generate security for Pakistan and stabilise the South Asian security balance. It is almost as if the rationalisers were looking for a partner in crime, or a way of

sharing the opprobrium and blame that would come India's way because of the nuclear tests. Some of them put out elaborate arguments in favour of a nuclearised South Asia as a guarantor of peace and stability.

Some of these same worthies had acted as cheerleaders when India repeatedly shot down proposals made in the 1980s and 1990s by Pakistan for halting the race with India to acquire nuclear weapons. Pakistan made a total of seven proposals ranging from a joint declaration of nuclear weapons renunciation with third party or joint verification, to a signature of the Nuclear Non-Proliferation Treaty (NPT) and a nuclear weapons-free zone in South Asia.

Pakistan's nuclear weapons pursuit was public knowledge and well-documented by the mid-1980s. The famous interview with Kuldip Nayar in which Abdul Qadir Khan boasted, "Tell them we have it the Bomb ... " took place in 1987.

India failed to respond to any of these proposals. Indeed, it dismissed them by calling into question Islamabad's sincerity. The Indian government did not even try to test this sincerity or call Pakistan's bluff by making counter-proposals of its own. Except for formulating the Rajiv Gandhi plan of 1988 for complete global nuclear weapons elimination - which it presented before the United Nations General Assembly's Special Session on Disarmament III, but did not pursue - India did nothing to address the "threat" it perceived from the Pakistani nuclear weapons programme.

India essentially relied on the United States to mount pressure on Pakistan through the Pressler Amendment and similar devices, and lobbied Washington to this end, expending a huge amount of energy in the process. The pressure was directed at limiting arms transfer to Pakistan after the Soviet Union's withdrawal from Afghanistan and to slow down Pakistan's nuclear programme by making all aid to it conditional upon a U.S. presidential certification that the programme was not aimed at producing nuclear weapons.

### **Irrational Stand**

The Indian government's stand was deeply irrational. On the one hand, it emphasised the security threat from Pakistan's nuclear weapons capability. On the other, it did little to defuse the threat and refused to dismiss it bilaterally. The stand can only be explained as the result of India's keenness to continue its own nuclear weapons pursuit, while maintaining and

expanding various technological and practical options relevant to it.

In addition, a significant current of opinion in the Indian establishment had convinced itself that Pakistan, a country much less industrialised and technologically accomplished than India, could not develop a nuclear weapons capability based on borrowed or pilfered designs of uranium enrichment centrifuges and imported materials and equipment. Former Atomic Energy Commission Chairman Raja Ramanna publicly stated any number of times - in December 1997, April 1998, and so on - that Pakistan did not possess a nuclear weapons capability. Our nuclear apologists and cheerleaders never questioned this ludicrously irresponsible assessment.

In May 1998, the Indian government chided and taunted Pakistan into conducting tit-for-tat nuclear tests and hypocritically justified India's own tests by citing Pakistan's nuclear blasts. It never occurred to anyone in the Indian policymaking establishment that nuclear weapons might have a deeply destabilising domestic impact in Pakistan as well as dangerously upset the security balance in South Asia.

Not even the Kargil war, the world's first serious large-scale conventional conflict between two nuclear weapons states - beside which the 1970s' small-scale clashes between the Soviet Union and China at the Ussuri river pale into insignificance - triggered a change in this complacent mode of thinking.

In conformity with the high dogma of nuclear deterrence theory, it was blithely assumed that India and Pakistan would enter into a stable security equation, and that nuclear weapons would induce maturity and moderation among their leaders.

### **Pakistan's Adventurism**

In reality, nuclear weapons possession bred adventurism in the Pakistani leadership. General Pervez Musharraf launched the Kargil operation with Pakistani troops disguised as a private militia - in the belief that Pakistan's nuclear weapons would provide a shield behind which to conduct a large-scale conventional operation.

Kargil precipitated a domestic crisis in Pakistan - in the form of a confrontation between Prime Minister Nawaz Sharif and Musharraf that led to the coup of October 1999, detabilising the military-civilian balance, made worse by the rise of jihadi extremism supported by the Inter-Services Intelligence (ISI) and other shadowy agencies. The December 1999 hijacking of an Indian Airlines aircraft to Kandahar was the direct result of such extremist activity and showed how close to the brink Pakistan had travelled.

The cataclysmic events of September 2001 and the subsequent disclosure of A.Q. Khan's nuclear smuggling activities suddenly highlighted the possibility of Pakistan's nuclear weapons falling into the hands of extremists or jihadis infiltrating into Pakistani nuclear facilities and building cells in

them. Those dangers are not imaginary. After all, the Khan network included people like Sultan Bashiruddin Mahmood, who helped build gas centrifuges for Pakistan and design the Khushab reactor to produce plutonium for nuclear weapons in addition to the enriched uranium that has helped Pakistan make 80 to 100 bombs.

Mahmood is an eccentric who is obsessed by such things as the links between science and the Quran and the possible role of sunspots in setting off the French and the Russian revolutions. Mahmood regards Pakistan's nuclear weapons as "the property of a whole Ummah", the global Muslim community. Mahmood and one of his colleagues were reported to have met Osama bin Laden and Ayman al-Zawahiri in Afghanistan in August 2001.

Pakistan's official position is that its nuclear arsenal is totally secure and safe. As Lieutenant General Khalid Kidwai told The New York Times, "Please grant to Pakistan that if we can make nuclear weapons and the delivery systems, we can also make them safe. Our security systems are foolproof." But U.S. Intelligence reports suggest otherwise: foreign-trained Pakistani scientists, including some suspected to have sympathies for radical Islam, have been returning to Pakistan to seek jobs in the nuclear establishment, and the influence of jihadi extremists is growing in the armed forces, including in special units that may be detailed to protect its nuclear facilities.

The U.S. reportedly offered

special help to Pakistan in the form of "permissive action links", or locks that prevent the unauthorised movement, deployment and use of nuclear weapons, as well as other technological devices such as perimeter monitoring to secure its nuclear facilities. It is not certain if Pakistan accepted all the offers - although some reports suggested it did - and how closely the Americans are monitoring its nuclear activities with what has been described as a "small, covert programme".

Now, investigative journalist Seymour Hersh says (The New Yorker, November 16) that the U.S. has been negotiating highly sensitive understandings with the Pakistan military about the security of its nuclear arsenal, including stationing specially trained American units to provide added security for Pakistani nuclear facilities in situations of crisis. This assistance would be given in return for the transfer of substantial sums of money to the military to equip and train Pakistani soldiers and to improve their housing and other facilities.

Hersh reports that the principal fear in the U.S. administration is that a special nuclear danger arises in Pakistan from the need to scatter its stock of nuclear weapons (to protect them from possible attacks by India), and at the same time, the need to ensure highly centralised command and control over them. The Pakistani nuclear doctrine calls for nuclear warheads and their triggers to be stored separately from one another, and from their delivery

vehicles. But this also makes the weapons vulnerable to diversion during shipment and reassembly.

The report has been stoutly denied by the Pakistani government that accuses Hersh of an anti-Pakistan sensationalist bias. But it sounds perfectly plausible. How far such efforts will succeed in securing the Pakistani arsenal is not clear. The U.S.-Pakistani relationship is deeply troubled especially after the Pakistan Army's ground offensive in South Waziristan. It is not excluded that the Pakistani military will keep a small "reserve" of nuclear weapons outside the scope of monitoring by the U.S. Meanwhile, jihadi militants have begun to target the Army itself, as the audacious attack of October 17 on its headquarters in Rawalpindi shows.

India must be deeply concerned at these developments. India has a vital interest in securing Pakistan's nuclear arsenal. India can play a helpful role by offering an assurance to Pakistan that it will not target its nuclear weapons facilities. At the same time, India must indicate that it is willing to discuss nuclear risk reduction and restraint measures with Pakistan, such as stationing nuclear weapons and delivery vehicles far away from the border and maintaining strict separation between warheads and missiles. This could go a long way in generating some confidence and in facilitating a more cooperative attitude in Islamabad.

\* The author is a veteran journalist, columnist and author

of a number of books and articles. A Fellow of the Transnational Institute ( TNI), Amsterdam, Netherlands. Authored a number of books and

articles. A co-recipient of the International Peace Bureau's Sean McBride International Peace Prize for 2000 with Achin Vanaik. An NCC member of the CNDP.

[Source: <<http://www.prafulbidwai.org/index.php?post/2009/11/19/An-insecure-arsenal>>.]



### III. A Path for Peace in South Asia

Zia Mian\*

It has been a grim start to the New Year and the new decade in South Asia. Vested interests, hardened obsessions, and old habits continue to push India and Pakistan in the direction of ruinous conflict. While military planners in both countries plan and prepare for the next war, politicians and diplomats remain determined not to talk except on their own terms.

On this stony ground, civil society in Pakistan and India has been struggling for years to build peace. There are signs the people of the two countries are ready to make peace and seek the benefits of a peace dividend if their governments would only permit.

#### War Plans

General Deepak Kapoor, India's army chief and chairman of its chiefs of staff, revealed at the end of December 2009 that the military has been working on a new doctrine and seeks major new capabilities. India's armed forces, he said, want to be able to mobilize and deploy for war very quickly, and to be able to fight a two-front war (against Pakistan and China). India also wants to be able to project military power from the Persian Gulf to the Malacca Strait

(which connects the Indian Ocean to the Pacific) and seeks, among other things, to have ballistic missile defenses and space-based capabilities.

The doctrine isn't all wishful thinking. The Indian military has been developing and war-gaming for the past five years a strategy it calls "Cold Start." This massive conventional attack on Pakistan would be so sudden and decisive that international intervention could not come soon enough to stop the conflict. India's armed forces would even be prepared to keep fighting if an adversary uses nuclear weapons on the battlefield. According to an Indian commander, the goal was to be able to "dismember a not-so-friendly nation effectively and at the shortest possible time."

This kind of war-making capability is expensive, but India has started to put real money behind it. In January, India's Defense Ministry announced that it plans to spend over \$10 billion this coming year on acquiring new weapons. This was made possible by a staggering 34 percent increase in India's military budget for 2009-2010.

General Kapoor's remarks

made Pakistan's generals bristle. Speaking to senior military officers at Pakistan's General Headquarters, the Chief of Army Staff General Parvez Kayani said that "proponents of conventional application of military forces, in a nuclear overhang, are chartering an adventurous and dangerous path, the consequences of which could be both unintended and uncontrollable." In other words, Pakistan was threatening to use nuclear weapons if India tried to carry out the kind of conventional attack it has been rehearsing.

Pakistan has been building new facilities that will allow it to significantly increase the size of its nuclear arsenal. It has been working on two new nuclear reactors to make plutonium for weapons, one of which may begin operating in 2010. It has also been constructing facilities to make fuel for these reactors and to separate the plutonium that will be produced in the new reactors. The cost of these facilities, along with rest of Pakistan's nuclear weapons program, is unknown.

Pakistan also has been building up its own conventional forces. At the end of December, Pakistan received the first of



four Swedish-made airborne early warning aircraft. Media reports say the planes, bought at a cost of almost \$900 million, are intended to let the Pakistan Air Force "detect all aircraft taking off from and landing at all forward Indian airbases adjacent to Pakistan and also to identify the type of aircraft, their weapons systems, vector and altitude." Pakistan also has a deal with China for four early warning planes at a cost of over \$250 million. To extend the operating range of its aircraft, the Air Force has been buying mid-air refueling tankers from Ukraine, with three tankers expected to be delivered this year, to add to the one that arrived last month.

### **Prospects for Peace**

While they continue to pour billions of dollars into their arms race, and prepare and plan for war, the governments of Pakistan and India are expending little effort to try to peacefully resolve their disputes.

They have promised to make peace many times. In the wake of the first war, in 1948, India's Prime Minister Jawaharlal Nehru and Pakistan's Prime Minister Liaquat Ali Khan committed that future disputes "shall always be solved through recognized peaceful methods." Following the 1965 war, the Tashkent Agreement declared that the two countries would "restore normal and peaceful relations...and promote understanding and friendly relations." After the 1971 war, as part of the Simla Agreement, leaders of the two countries said they would seek "an end to the conflict and confrontation that have hitherto

marred their relations and work for the promotion of a friendly and harmonious relationship and the establishment of durable peace." The promises didn't last.

At the heart of the conflict is the disputed territory of Kashmir, which has been divided between the two countries for over 60 years. Pakistan claims all of Kashmir, India insists on holding on to what it has, and the people of Kashmir are trapped in between. The last round of the struggle was the 1999 Kargil war, in which a newly nuclear-armed Pakistan sent Islamist militants and soldiers into Indian-held Kashmir, in an effort to force international intervention and make India negotiate a final settlement. Nothing came of it.

The futility of the Kargil war, the very real danger of it escalating into the use of nuclear weapons, and the rise of an Islamist militancy that threatens both Pakistan and India led the two countries in 2003 to try to find a settlement. Steve Coll reported on the back-channel talks that were set up between the two countries and how close they came to success: By early 2007, officials were "negotiating the details for a visit to Pakistan by the Indian Prime Minister during which, they hoped, the principles underlying the Kashmir agreement would be announced and talks aimed at implementation would be inaugurated."

The process stalled as the Musharraf government began to collapse for domestic political reasons. And then came the

November 2008 attack on the Indian city of Mumbai, where Islamist militants affiliated with the Lashkar-e-Taiba, a group based in Pakistan with long-standing ties to the army and its intelligence service, went on a rampage and killed almost 200 people and injured many more. The Indian government demanded that Pakistan shut down the militant group and punish those responsible for planning the attacks-or else no further talks would take place.

Hopes for a way forward rose in July 2009, when the prime ministers of the two countries met during a gathering of the Non-Aligned Movement at Sharm el-Sheikh in Egypt and issued an agreed statement. Since then, nothing. Pakistan has not acted decisively against the Lashkar-e-Taiba; even though Islamist militant groups imperil Pakistan, some there still see a role for them in fighting the 60-year war against India over Kashmir. India will not talk about settling Kashmir, even though it would take away the very justification Pakistan uses for supporting the militants groups.

There is a failure of imagination on the part of the governments in India and Pakistan. Neither seems able to realize how much would change if the two countries formalized and committed publicly to the agreement on Kashmir that was within reach in 2007 as part of the back-channel talks. The future is held back by the past.

### **Leading the Way**

The choice facing Pakistan and India is stark. It was perhaps

best described by the late Eqbal Ahmad, who played an important role in many India-Pakistan dialogues, when he argued that an enduring peace between India and Pakistan was an "urgent necessity" because without it:

Hostility between the two will continue to distort the political and economic environment of both countries, inflict upon their inhabitants the augmenting costs of subversion

and sabotage, inhibit regional cooperation, and force more than a billion people to live perpetually under the menace of nuclear holocaust...Such distortions will continue to grow as long as our governments do not restore to this region its natural millennial flow-of rivers and mountains, ecology and production, and commerce and culture.

\* The author is a physicist with the Program on Science and Global Security, Woodrow

Wilson School of Public and International Affairs, at Princeton University, where he directs the Project on Peace and Security in South Asia. He is the editor and co-editor of several books and co-maker of two documentary films conflicts and nuclear danger in South Asia. He is a peace activist and close associate of the CNDP.

[Source:

<[http://www.fpif.org/articles/a\\_path\\_for\\_peace\\_in\\_south\\_asia](http://www.fpif.org/articles/a_path_for_peace_in_south_asia)>.]



## C. Nuclear Disarmament: Global Perspective

### I. Doomsday Clock Set Back by A Minute

Dan Zak

**M**AN is the only creature that knows it's going to die, and atomic scientists are the only professionals who measure the amount of time before man annihilates himself. But there is good news from those scientists: Humanity inched away from Armageddon on Thursday morning. The Doomsday Clock was set back one minute, from 11:55 to 11:54, reversing a precipitous slide toward midnight, the zero hour, ultimate self-destruction.

The clock was reset to reflect a "more hopeful state of world affairs," the Bulletin of the Atomic Scientists announced at the New York Academy of Sciences and over a live feed on the Internet. Forty policymakers, scientists and Nobel laureates on the board of the Bulletin -- an online magazine that covers threats to humanity -- decided to move the clock after spirited debates

about current trends in science and politics.

"We are poised to bend the arc of history toward a world free of nuclear weapons," the board said in a statement. "For the first time since atomic bombs were dropped in 1945, leaders of nuclear weapons states are cooperating to vastly reduce their arsenals and secure all nuclear bomb-making material. And for the first time ever, industrialized and developing countries alike are pledging to limit climate-changing gas emissions that could render our planet nearly uninhabitable."

This is the 19th time the clock has moved in 63 years. The creators of the Manhattan Project wound up the symbolic device in 1947 to remind the world of the consequences of abusing nuclear power. Since then, the clock has moved forward 11 times and back

eight times. It came closest to midnight in 1953, when the testing of hydrogen bombs nudged it to 11:58, and moved furthest away in 1991, when it slid to 11:43 after the Strategic Arms Reduction Treaty. The clock has been steadily ticking toward midnight since the mid-'90s, as increased terrorism destabilized regions of the world and India and Pakistan tested nuclear bombs.

So, atomic scientists: Are they a nervous bunch?

"I actually think most of them are optimists," says Kennette Benedict, executive director of the Bulletin. "They think human beings can channel technology and have the capacity to cooperate and tackle these problems. That's why they bother to get word out. They're not on edge."

The Bulletin's statement

also cited President Obama's "pragmatic, problem-solving approach," arms reduction talks with Russia, negotiations with Iran over its nuclear enrichment program and support for a fissile material cutoff treaty at the U.N. Security Council last September, though Obama has also endured partisan challenges to his leadership on national security over the past year.

The number of nuclear weapons in the world has decreased by 4,000 over the past three years, to 23,000, according to Benedict. Regardless, Hollywood still churns out apocalyptic movies ("The Road," "2012" and "Knowing" premiered over the past 10 months), and 50 million Americans still believe the world will end in their lifetimes, according to Nicholas Guyatt, author of "Have a Nice Doomsday: Why Millions of Americans Are Looking Forward

to the End of the World."

"Continuing tensions with Iran, the bad weather in Europe and especially the earthquake in Haiti will all be taken as 'end times' indicators," Guyatt, a history professor at the University of York, writes in an e-mail. "My guess is that [apocalyptic Christians] would happily move the clock forwards by a couple of minutes. The irony, of course, is that these guys -- unlike the atomic scientists -- are actually rooting for doomsday."

On the eve of the massive quake in Haiti, the Rapture Index rose to its highest point since Sept. 11, 2001, on the Web site Rapture Ready, which describes itself as the largest prophecy site on the Internet, with 240,000 unique visitors a month.

"Scientists seem to be driven

by what's going on politically," says the site's founder, Todd Strandberg, who lives in Benton, Ark., calls himself an end-time believer and recalculates the index every Sunday based on man-made, natural and allegedly supernatural phenomena. "I suppose we tend to be the eternal pessimists because the Bible says it's going to get worse. So any time they move [the Doomsday Clock] back, the general reaction is scorn."

Expect another crucial prognostication soon: Next month a groundhog will divine the probability of six weeks of winter, leaving nuclear winter to the scientists and the rapture to the prophets.

[Source:  
<<http://www.washingtonpost.com/wpdyn/content/article/2010/01/14/AR2010011402487.html?hpid=sec-artsliving>>.]



## II. The 2010 NPT Review Conference

### Forecasting the Outcome\*

**Sergio Duarte, High Representative for Disarmament Affairs, United Nations**

I wish to begin today by thanking President Carter and his colleagues at the Carter Center for hosting these Atlanta Consultations on the NPT. I also wish to thank Henrik Salander and the Middle Powers Initiative, a program of the Global Security Institute, for their many contributions in organizing this very constructive series.

Their collective efforts illustrate well the fine contributions that civil society can make in advancing nuclear disarmament and non-proliferation goals. Together, they have done much to promote both public understanding and diplomatic support for this vital treaty.

We know, however, that forecasting political outcomes

has repeatedly proven to be an inexact science. There is little doubt, however, that the future of this Treaty will depend upon determined leadership from key nuclear-weapon States, extensive cooperation among States parties, and a strong foundation of supporting civil society.

There are some encouraging signs. Presidents Obama and Medvedev have openly and

repeatedly underscored their commitment to pursue a world without nuclear weapons, as have the leaders of other states that possess them. At the Review Conference next May, nuclear-weapon States are expected to expand on the steps they have undertaken so far to fulfil their disarmament commitments under Article VI and those made at previous Review Conferences, especially in 1995 and 2000. The Review Conference can provide a useful platform for a better understanding of what has already been accomplished and to explore future possibilities.

Support for the treaty remains overwhelmingly strong among the States parties. There seems to be general agreement that a positive outcome should be based on a balanced approach to the three pillars of the NPT: disarmament, non-proliferation, and peaceful uses of nuclear energy, backed by a common desire to avoid the negative result of 2005.

There is certainly no lack of proposals to improve the efficient implementation of the Treaty, and these are being discussed in several meetings by government officials, former statesmen, scholars and representatives of the most reputable institutions of civil society. And we are all aware of the cascade of initiatives that have appeared in recent years, especially with respect to nuclear disarmament. The President of the United States will convene a multilateral conference on nuclear security later this year. Last September, he presided over a historic meeting of the

Security Council on discuss disarmament and non-proliferation-an event that has provided a powerful impetus to the treatment of these issues under the aegis of the United Nations. There are sound reasons to expect that a follow-up arrangement to the START Treaty can be finalized before the Review Conference. Russia and the United States have also indicated their intention to pursue further reductions once those arrangements are ratified.

However, there are also some disquieting indications. At last year's third session of the Preparatory Committee for this Review Conference, States parties were able to agree on the most important procedural issues, but they were not able to reach a consensus on substantive recommendations. Of concern here is not just the depth of disagreements on substantive issues, but the breadth of them, covering several areas that lie at the very heart of the treaty.

In addition, the split voting on many nuclear weapon-related resolutions in the last session of the General Assembly continues a trend measured not in years, but in decades. At the 64th session, for example, only three of the 16 nuclear weapon-related resolutions were adopted without a vote. And with respect to six of the remaining resolutions, 50 or more states voted either against or abstained-typically including nuclear-weapon States and states that are covered by what has come to be known as the "nuclear umbrella."

The highly uneven evolution

of the rule of law in disarmament and non-proliferation is also cause for concern. Key treaties-like the Comprehensive Nuclear-Test-Ban Treaty-have not entered into force. Negotiation of a fissile material treaty may not begin by the time the Review Conference convenes, despite the successful effort to break the procedural deadlock last year at the Conference on Disarmament in Geneva. Protocols to treaties creating four regional nuclear-weapon-free zones remain un-ratified. Several States parties have not yet concluded their NPT safeguards agreements with the International Atomic Energy Agency, and there is still no global consensus on the Additional Protocol as the agreed international safeguards standard.

Meanwhile, claims of non-compliance with non-proliferation commitments continue to be made. The DPRK is still pursuing its nuclear weapon programme. Resolutions adopted by the Security Council have been disregarded. There has been no progress, and in fact no serious efforts made, concerning the implementation of the 1995 Resolution on the Middle East. There is no agreement on proposals to establish multinational nuclear fuel cycle facilities. There is no consensus on rules governing nuclear cooperation with non-NPT States or even on its consistency with fundamental aims of the treaty. And though nuclear-weapon delivery systems are mentioned in the NPT Preamble, this issue has never

received much attention in the NPT Review Conferences, while new delivery systems are being developed and produced. In the bilateral field, even if Russia and the United States agree on a follow-up arrangement for the START Treaty, ratification in both countries may not be completed in time for the NPT Review Conference.

There is without question in the world today a widespread expectation that the time has clearly come to de-value, de-legitimize, and reduce the role of nuclear weapons in defence policies. States parties are therefore concerned about the many activities that are underway in the nuclear-weapon States that have been called "modernization", whether this term is taken to mean technical improvement of the arsenals or simply a "refurbishing" to ensure their reliability over a longer period of time. What is most in need of modernization and refurbishing right now is disarmament itself-especially in the field of transparency, including verification and credible efforts to achieve irreversible reductions. Recent and repeated efforts by the Governments of the United Kingdom and Norway to promote technical cooperation in such fields are together a step in the right direction toward fulfilling that objective. Indeed, I think most NPT States parties would agree that the time has come to replace weapon-stewardship with disarmament-stewardship.

Other questions have arisen concerning the gap between solemn commitments to the

goal of nuclear disarmament, and the lack of domestic infrastructures to achieve it. I am referring here to the absence of disarmament agencies, legislative disarmament mandates, and line-item disarmament budgets. Meanwhile, the persisting lack of a reliable basis for gauging the number of nuclear weapons in the world, along with their fissile materials, testifies to the progress that is needed in the field of transparency.

In addition, the doctrine of deterrence remains in place as the lodestar of all states that possess nuclear weapons. This is a doctrine that underscores the necessity of possession to serve vital national security interests-yet the states making this claim argue that it applies only to them. It is precisely because deterrence obviously can provide a convenient justification for proliferation that Secretary-General Ban Ki-moon has referred to it as being "contagious"-as the weapons have spread, so too has their associated doctrine.

Also worrisome is an ever-expanding list of "conditions" that have been put forward by various officials and scholars from nuclear-weapon States - conditions that have to be in place before nuclear disarmament can be seriously considered. Some have even gone so far as to say that unless there are ironclad assurances or "guarantees" against further proliferation, the nuclear-weapon States may not take meaningful steps toward disarmament.

We all understand that

disarmament must meet certain standards, including the agreed criteria of transparency, irreversibility, verification, and binding commitments. Yet this outpouring of new preconditions for disarmament is posing a major challenge to the prevailing understanding that non-proliferation and disarmament should proceed in parallel and in a mutually reinforcing way. Up to now, ironically, the accepted view has been that-pending nuclear disarmament-the non-nuclear-weapon States are entitled to adequate, credible guarantees against being attacked with nuclear weapons. Negative assurances, as they have come to be called, certainly constitute a strong vaccine against the contagion of nuclear deterrence.

All of these considerations make forecasting the outcome of the 2010 NPT Review Conference an extraordinarily difficult undertaking. One very primitive indicator of a successful outcome would of course be a consensus Final Declaration that would go beyond mere reiteration of commitments, and instead contain at least some kind of action plan to foster the implementation of all provisions of the treaty, thus enhancing its significance and credibility. I noticed that the last Atlanta Consultation in January 2005 called for a "balanced approach" to the issues of nuclear disarmament and non-proliferation. Yet its sound recommendations were not heeded and the Review Conference concluded with what was almost universally viewed as a disappointing outcome.

The outcome of the next Review Conference will be determined largely by the extent that the States parties as a whole perceive that the rights and obligations prescribed in the treaty are being faithfully and responsibly exercised and observed by all Parties. This requires that all Parties have the opportunity to participate in the review process and that the review leads to the fulfilment of the treaty's objectives to the satisfaction of all.

The theme of balance is also inherent in the recent proposals made by the Secretary-General—specifically, his five-point proposal of 24 October 2008, which he elaborated on 8 December 2009 in his Action Plan for Nuclear Disarmament and Nuclear Non-Proliferation. He stated that this was "founded on a fundamental principle: nuclear disarmament and nuclear non-proliferation are mutually reinforcing and inseparable" and "should be pursued in tandem."

Note that he did not say that one should precede the other. The world simply cannot hold progress on nuclear disarmament hostage to the prior elimination of all risks of nuclear proliferation or nuclear terrorism, nor to the achievement of world peace, the end of aggression, and guarantees of the peaceful settlement of all disputes. The Secretary General's views

instead echoed a theme found in the speech by President Obama in Prague on 5 April 2009—especially the reference to America's "commitment to seek the peace and security of a world without nuclear weapons." In other words, peace and security are not preconditions for establishing such a world—they are instead benefits of such a world.

A significant number of Member States of the United Nations and of the NPT have expressed support for the Secretary-General's five-point proposal and Action Plan. In time, I believe more and more States will come to support it. The Plan affirms the merit of pursuing a nuclear weapons convention or a framework of separate, mutually reinforcing legal instruments. It recognizes the need for unambiguous security assurances and the need for an active role of the Security Council in advancing disarmament. It identifies several ways to strengthen the rule of law in disarmament, emphasizing both the importance of treaty compliance and the need to bring some new treaties into force, and to negotiate others. It emphasizes the need for improvements in both transparency and accountability. And it recognizes the need for complementary measures, such as controls over missiles and space weapons.

I doubt that even the most

positive outcome at the Review Conference would—in itself—be sufficient to address all of the many complex issues associated with the actual achievement of a world without nuclear weapons. Yet such an outcome, nevertheless, would be vitally important for the world community precisely because of the improved political climate it will set for future progress on the long and ambitious road ahead to zero.

So while I am unable to predict the outcome of the Review Conference with any confidence, there are undoubtedly many positive trends that are likely to continue, and several worrisome signs to monitor closely over the months ahead. We may yet witness a positive result that will send us on our way, toward that great destination the world has so long been seeking—a world without nuclear weapons—and away from the perilous shores that threaten us all today.

\* Text of the address delivered at the Atlanta Consultation III: "Fulfilling the NPT", under the auspices of the Carter Center, Atlanta, Georgia on 21 January 2010.

[Source:  
<<http://www.un.org/disarmament/HomePage/HR/docs/2010/2010January2Atlanta.pdf>>.]



### III. Towards 2010 and Beyond

## Challenges for the Non-Proliferation Regime and the Middle East

Sameh Aboul-Enein\*

THE nuclear non-proliferation regime is faced with profound challenges and dynamic opportunities. This short analysis, delivered in the closing panel of the 2009 Carnegie International Nonproliferation Conference on "The Nuclear Order - Build or Break", focuses on five practical steps to move forward to 2010 and beyond.

#### I. The 2010 Review Conference

The 2010 NPT Review Conference represents a real window of opportunity to build on previous commitments - such as those made in 2000 - and to take concrete steps to achieve progress towards a nuclear weapon free world. The responsibility to achieve that lies with all of us - nuclear and non-nuclear weapon states, members and non-members of the NPT.

The preparatory meetings suggest there is a real willingness on the part of many members to strengthen the treaty and achieve its universality. We must remember today that key successes included South Africa's historic decision to dismantle its nuclear weapons and join the Treaty, decisions by Brazil and Argentina to roll back their nuclear programmes and create a bilateral verification agency, and the decisions by Belarus, Kazakhstan, and

Ukraine to transfer nuclear weapons back to Russia after they seceded from the Soviet Union. The actions by these states to give up nuclear programmes and weapons deserve greater recognition, for they lead the way for other states with weapons and military nuclear programmes to follow.

Looking towards and beyond 2010, the NPT itself needs to be strengthened. We must utilize the remaining time before the 2010 Review Conference with more focused, constructive discussions among the key protagonists and interlocutors. We need to work towards agreement to establish a permanent secretariat and move towards creating an implementing organization to carry through decisions of Conferences of States Parties, working together with the International Atomic Energy Agency (IAEA) as appropriate. We could also consider ways to ensure continuity in the annual process and raise the tempo, perhaps by having a fourth PrepCom.

Member states should consider ways to raise the political profile of the NPT - how about making the upcoming NPT Review Conference in 2010 a ministerial level meeting, for example? We have recognized the need to

think along the lines of summits on the topics of energy, population, food, the financial crisis and climate change. Why can't there be a Summit for a Nuclear Free World? Such a Summit would provide a potential mechanism also to achieve the universality of the NPT.

More than ten years ago, the foreign ministers of seven countries - Brazil, Egypt, Ireland, Mexico, New Zealand, South Africa and Sweden - joined together to form the New Agenda Coalition to give fresh impetus to the efforts to achieve progress in nuclear disarmament. The need for such energy is as strong as ever today. We need a revitalized New Agenda Coalition to work closely with the Obama administration and the other nuclear weapon states to accelerate implementation on agreed practical steps and identify what more needs to be done.

As the vehicle for achieving this aim, we should pull together the 13 steps from the 2000 Review Conference with the many other practical proposals made by member states and expert groups since 2000. Balancing such initiatives will have a much better chance of achieving global consensus. A cross-regional multilateral and

multicultural dialogue is needed for this purpose, one with a clear objective of a world free of nuclear weapons.

## 2. The Conference on Disarmament

The Conference on Disarmament (CD) has a special role that it can play in nuclear disarmament. It is a unique forum that includes the P-5 plus the non-NPT members. It should immediately establish an appropriate subsidiary body with a mandate to deal with nuclear disarmament.

Much more could be done in Geneva. The CD has vast potential and expertise that can make a difference if governments can summon the necessary political will. Experts, diplomats, researchers, nongovernmental organizations and research institutes (including governmental ones) could do more; at least they could and should facilitate workshops and international dialogue. They can begin working on a genuine international collaboration.

The CD must begin negotiations on a nondiscriminatory, multilateral, and verifiable treaty banning the production of fissile material, based on the Shannon Mandate, with a view to completing the text within five years so that it can be opened for signature before the 2015 Review Conference. The deadlock over establishing an ad hoc committee on a Fissile Materials Treaty. If negotiations continue to be delayed, a group of experts should be convened and technical and scientific seminars should be held to discuss scope, definitions, transparency,

accountability, and verification issues.

In addition to reinvigorating efforts to negotiate a Fissile Materials Treaty, the CD should consider making progress on the following:

- Discussion by an ad hoc group of the steps that would lead toward systematic and progressive efforts to eliminate nuclear weapons.
- Dialogue among states that possess nuclear weapons and those that do not on practical steps that would facilitate the implementation of this commitment.
- Technical seminars to address issues of scope, definitions and verification for nuclear disarmament agreements.
- Development of ad hoc exchanges to establish a precedent that non-nuclear-weapon states have a legitimate interest and right to question nuclear-weapon states on nuclear disarmament matters.

Yes the CD can be revived! We need to open its curtains and get its members looking for common ground and cooperative action rather than simply issuing position statements. We can immediately establish several open-ended cross-regional working groups in the CD to move priority issues forward.

## 3. The Middle East

The 1995 Resolution on the

Middle East adopted by the NPT Review and Extension Conference recognized the region's special status, as did the Final Document of the 2000 NPT Review Conference. Insofar as it pertains to the NPT, particularly its review, implementation and universality, the 1995 Resolution on the Middle East focused on achieving the following clear objectives:

- The establishment of a nuclear-weapon free zone in the Middle East.
- The accession to the NPT by states in the region that have not yet done so.
- The placement of all nuclear facilities in the Middle East under full-scope IAEA safeguards.

Fourteen years have elapsed since the adoption of the 1995 resolution. It is clear that impetus must be given to this agenda. I support the suggestion that the 2010 Review Conference should appoint a Special Coordinator whose role would be to oversee implementation of the resolution. This will help to build confidence that this objective - so central to the indefinite extension of the NPT in 1995 - is being taken seriously.

Such a Coordinator could be tasked with facilitating a route to constructive dialogue in the framework of the 1995 Middle East resolution and to begin practical steps to convene an International Conference in the Middle East to address both regional security and a zone free



of nuclear and other weapons of mass destruction in the Middle East with the objective of establishing a legally-binding and internationally and effectively-verifiable treaty for such a zone. This would be a start, but significant wider beneficial consequences can be envisaged, for the peace process in the Middle East, for example.

The establishment of a nuclear-weapon-free zone in the Middle East is a first step toward creating an effectively verifiable zone in the Middle East that would be free of all weapons of mass destruction - nuclear, chemical and biological weapons and their delivery systems. I encourage all to look once again at Egyptian President Mubarak's initiative for the establishment of such a zone in the Middle East. It has three main components.

- a) The prohibition of all weapons of mass destruction - nuclear, biological, and chemical - in all states of the Middle East.
- b) All states in the region should provide assurance toward the full implementation of this goal, in an equal and reciprocal manner to fulfil this end.
- c) Establishing proper verification measures and modalities to ensure the compliance of all states of the region without exception.

All states in the region must acknowledge and accept a challenging and deep responsibility towards achieving regional security.

Looking forward from here, universality of the NPT is critical to regional and global security, because states remaining outside the Treaty fundamentally weaken it by undermining the benefits of membership for their neighbours and by maintaining nuclear programmes that constitute a continuing nuclear danger to their neighbours and the rest of the world.

For 2010 and beyond, the Review Conference should seriously consider establishing an NPT Universality Adherence Support unit to address directly the mechanisms that will bring states outside the treaty into the NPT as non-nuclear-weapon states.

#### **4. Beyond the 2010 Review Conference and Nuclear Zero**

We must not let the momentum slow after the NPT Review Conference. We must keep our eyes on the goal - the elimination of nuclear weapons and the assurance that they will never be produced or used again. This will require the active negotiation of a nuclear weapons convention, as called for by the UN General Assembly, and recently endorsed by the UN Secretary General in a speech on 24 October 2008. This is the logical conclusion to the current campaigns for global zero, and all states need to engage seriously with this project.

For the vision of zero to be credible, the permanent members of the UN Security Council should take the lead at an early stage. We have recently seen the link between

disarmament and non-proliferation explicitly acknowledged by several key statesmen - this is to be warmly welcomed. Their action agenda must now include verification, the progressive deep reduction of operationally deployed strategic warheads, and a freeze in upgrading, modernizing and replacing existing weapons.

The role of nuclear weapons in military doctrines must be progressively and dramatically reduced as a matter of urgency, not only to enhance strategic stability and contribute to a climate of international confidence and security, but also to facilitate the process of eliminating the weapons. Any plans to develop new nuclear weapons or new uses, roles, or rationalizations for their use must be shelved immediately.

The P-5 need to act in a coherent and coordinated manner in a way that demonstrates they have the necessary transparent and credible political commitment to carry through their agreed and required undertakings.

#### **5. Trust and the Way forward**

Finally, the concept of trust remains poorly understood, yet is central to our work on the future of nuclear disarmament and arms control. Mutual trust is a key to any process of cooperation among nations. Trust, in my view, is about constructive dialogue, cross-regional exchange, reaching out, crossing bridges and cross-cultural tolerance; it is about building mutual interests and respect for differences.

We need a genuine and candid conversation about nuclear disarmament between officials and experts from nuclear weapon states and non-nuclear-weapon states. There has not been such a conversation for a long time. We need to exploit all the opportunities that can exist to make this happen, and to invite into the conversation representatives of civil society who can inject valuable information, insights and perspectives, as well as providing bridges and discussion spaces, just like this one, that can help break deadlocks.

Civil society has a key role to play. It raised awareness on small arms and on cluster munitions, and before that on the need for a comprehensive ban on all nuclear testing. NGOs have forged an action-partnership with governments to achieve change that we are only beginning to see the consequences of. We need to

recognize the role of civil society and integrate NGOs more effectively and respectfully into the NPT review process - as partners with governmental diplomacy, with a different but essential role to play.

Furthermore, women have an essential role in peace-making and security-building that should be respected and supported. Women have long played a leadership role in promoting global disarmament, and gender perspectives can affect the way society views nuclear weapons and pave the way for them to be devalued and abolished. The road to total nuclear disarmament and the culture of peace must be part of an educational and awareness programme that will require women as well as men around the world to participate fully and actively.

Finally, the time has come for serious people of all political perspectives to engage in

thoughtful, transparent conversations with the clear objectives of ending current and potential proliferation and eliminating nuclear weapons, working towards an agreed target date, such as 2025.

\* The author is a diplomat and scholar. He holds an MSc from the American University and a PhD from the University of London and is a member of the multilateral study group on missiles convened by the Peace Research Institute Frankfurt (2008-11). Dr Aboul-Enein is Deputy Head of Mission at the Egyptian Embassy in London.

[Note: This article is based on the presentation the author made to the 2009 Carnegie International Nonproliferation Conference on "The Nuclear Order - Build or Break", held in Washington D.C. April 6-7. Available at <<http://www.acronym.org.uk/dd/dd90/90sae.htm>>.]



## IV. A civil society strategy for the 2010 NPT RevCon and beyond

### Proposal for a unified NGO strategy for the 2010 NPT-Review Conference and beyond\*

**Tilman Ruff and Dimity Hawkins (ICAN)**

**Rebecca Johnson (Acronym Institute for Disarmament Diplomacy)**

**John Loretz (IPPNW)**

**Ray Acheson (WILPF)**

#### Background

Since the NPT PrepCom this year, a number of people have been discussing the potential great value of a clear, unified strategy for next year's NPT Review Conference which as

many civil society organizations as possible could coalesce around, find useful for their work, and give strength and focus to the voice of civil society. The proposed strategy is being put forward by ICAN,

Acronym Institute and others. We believe that this can be taken up by many NGOs and would amplify and complement the work and strategies that they are already or individually pursuing.

Our objective is to build momentum for the abolition of nuclear weapons. In practical terms, we aim for a Nuclear Weapons Convention by 2020.

### **Rationale**

The current focus for many governments and NGOs is the 2010 NPT Review Conference, scheduled for 3-28 May in New York next year. So our strategy needs to recognise the importance of the NPT RevCon politically, but go beyond it. In addition to supporting NGO actions in New York we want to encourage civil society groups all over the world to lobby and act locally, with international coordination and impact both before and after the Review Conference. This is especially important to ensure that NGOs are strongly positioned to keep building for nuclear abolition after the NPT, and that we avoid the dangers of becoming hostage to the NPT's outcome (whether good or bad). And since government positions are largely set before such Conferences, the major work of influencing government policies and their marching orders to their diplomats needs to be undertaken in the months ahead of the Conference.

Our proposed strategy comprises two phases focussing around the 2010 NPT Review Conference. The first important task is to get the goal of a nuclear weapon convention (NWC) into the mainstream, ie. To gain recognition of an NWC as a realistic and reasonable concept even among those who think they disagree with it. We have largely won the moral and security arguments for why

nuclear weapons should be abolished. By putting the NWC onto the negotiating agenda we will shift the debate to when and how.

We want governments to move decisively away from dismissing the NWC as impossible or premature. We want to engage them in discussion of what the legal, technical, political and verification framework for the prohibition and elimination of nuclear weapons should entail. This strategy engages with the NPT but seeks to avoid NGO resources and energy becoming swamped by it. Many NGOs, including Mayors for Peace and Abolition 2000, have plans to get people to New York for the RevCon. We support these efforts and want to do something that complements them, while recognising that it is expensive and difficult for many to get to NY. Moreover, access to diplomats is likely to be quite restricted due to the negotiating nature of the Conference, and the extensive renovations which will be underway at the UN. And government policies will be determined before the diplomats get to New York.

### **Strategy Phase I - from now to the May 2010 NPT Review Conference**

The aim of the first phase is to get governments to identify the need for some kind of nuclear weapons prohibition treaty in their statements, whether or not they refer explicitly to a NWC by name. As many non-aligned countries and also Australia and Austria have done, we want consideration of a NWC to be mentioned in government

statements and working papers to the NPT, with the aim of getting formal recognition into a final NPT document.

To implement this strategy, supporters must first try to get language into their own country's statements and working papers. In addition to direct governmental approaches, we should work on elected representatives including parliamentarians and mayors, to persuade them to advocate this position.

In addition, groups should link with advocates in other countries to push for as many key governments to include NWC language, prioritising where they have regional or political links. It is especially important that we assist and work with small as well as large states in our regions, especially the over-110 NPT parties in the Non-Aligned Movement who are likely to support the NWC but may not have thought to include it in their statements and position papers for the NPT. So we can help them in capacity-building by providing them with positive language on the need for a NWC by 2010. The aim is not to promote the model NWC as such or get identical language into all the statements, but to build up an accumulation of proposals that mention a nuclear weapon treaty in some form.

For those governments that don't feel comfortable with explicit reference to a nuclear weapon convention, the NGOs could suggest the government endorse the UN

Secretary General's five-point disarmament plan (put forward 24 October 2008), the first point of which referred to consideration of a nuclear weapons convention or other legal framework. Failing that, they could consider phrasing along the lines of the 2009 Chair's (first) draft recommendations e.g. to consider "ways and means to commence negotiations in accordance with article VI, on a convention or framework of agreements to achieve global nuclear disarmament, and to engage non-parties to the NPT". The point is to get the concept of a comprehensive abolition treaty into the mainstream, not to advocate for a specific version. However, when governments agree to include reference to the need for a nuclear weapon convention, NGOs should then lobby to take them two further steps forward:

- 1) to advocate that negotiations on an NWC (or similar) should commence before the next NPT RevCon in 2015; and
- 2) that an NWC should be concluded by 2020 (recognising that its full implementation may well take longer).

### **Strategy Phase 2 - from the end of the May 2010 NPT Conference to the end of 2010 and beyond**

The second phase starts with a day of internationally coordinated, locally implemented actions after the end of the RevCon, to inspire

and keep up the momentum for a NWC, with messages tailored to build on (or parachute over) the NPT outcome, whether it is deemed a success or a failure.

The aim of the second phase is to build civil-society + government partnerships to get the conditions and steps for a NWC on track. This part of our action plan begins with internationally coordinated actions all over the world some time over Saturday 5 June 2010, the weekend after the RevCon ends (scheduled for 28 May). Each national or local group or network will organise a demonstration or other action or event; for example either at a key governmental location or, if in a nuclear weapon state, a nuclear weapon-related facility. NGOs are locally responsible for choosing the locations, timing and type of actions or demonstrations they want to undertake. For example, UK NGOs are discussing holding events at Faslane, Aldermaston and maybe in London as well.

Though we are calling 5 June 2010 "Global Nuclear Abolition Action Day", the date 5 June has for some time been established World Environment Day, so groups may want to network with local environmental groups to link and amplify both messages on this day.

Though events are local, a consistent message will be worked out at the end of the Review Conference, regardless of whether it ends as a 'success' or 'failure'. Working with partners, ICAN will be responsible for hosting the action website, reviewing the

outcome of the RevCon and developing a strong and inspiring message that as many civil society organizations as possible can agree on.

We plan to set up a website linked with ICAN which will provide information and show what is happening with the NPT and also (with clickable maps) where the various actions are going to happen, with information, photos and messages. We hope that it will be possible for groups to be autonomously responsible for the content of their own action pages before, during and after the Review Conference and June 5 demonstrations (we will need to work out the ground-rules and practical implementation of this).

The inspiring, unified messages about the need for a Nuclear Weapon Convention will play an important role in how the movement is able to move forward after the 2010 Review Conference.

Whether the NPT RevCon is viewed as a success (able to adopt important decisions) or a failure (deadlock, or no or inadequate agreements), we need to be ready with a strong and positive message that inspires and encourages: that now is the time to push for a nuclear weapon treaty. If politics and diplomatic tactics cause the RevCon to fail, it could leave current disarmament objectives and aspirations in tatters even if the reasons for failure were structural and political. In that case we will need to energise ourselves and our movements with really good positive actions

calling for nuclear abolition. Even if the RevCon is regarded as a success, the disarmament agreements are likely to be incremental steps that at best may not go much beyond the 2000 agreements (and may possibly roll them backwards). Depending on the outcome, there is a risk that the disarmament movement becomes deflated, demoralised or marginalised (or else people think the job's done). A positive action can use the NPT outcome as a springboard to inspire people and invigorate mobilising for a NWC.

We would appreciate hearing thoughts and suggestions on smart slogans for use through the day. For example, one we have played with is "NWC - Now We Can!" Ideas and suggestions welcome.

We would also welcome comments on this strategy -

please forward comments to Dimity Hawkins, ICAN Australia Campaign Director on [dimity@icanw.org](mailto:dimity@icanw.org) and she will share this with the others. If you like it, please run with it!

### Summary

A civil society strategy for the 2010 NPT RevCon and beyond

### Phase I

- 1) In the months leading up to the RevCon, encourage and pressure as many governments as possible to support the concept of a Nuclear Weapons Convention - a comprehensive, verifiable, irreversible, phased treaty to outlaw and abolish nuclear weapons; or similar abolition framework; in their NPT statements and working papers.
- 2) Encourage those who support the concept of a

global nuclear weapons abolition treaty to urge that:

- a. negotiations on an NWC be commenced by 2015, and
- b. are concluded by 2020

### Phase 2

- 3) Globally-coordinated civil society actions on 5 June 2010 responding to the NPT RevCon outcome and calling for negotiations on a NWC
- 4) Building civil society + government partnerships to prepare for and push for negotiations on an NWC to commence.

\* First circulated in November 2009, then revised in January 2010 and jointly proposed by the authors.

[Source: <[www.icanw.org](http://www.icanw.org)>.]



## V. Nagasaki Appeal 2010

### The 4th Nagasaki Global Citizens' Assembly for the Elimination of Nuclear Weapons

**W**E have gathered from around the world at the Nagasaki Global Citizens' Assembly for the Elimination of Nuclear Weapons for the fourth time to demonstrate our determination that Nagasaki be the last place ever to suffer a nuclear attack. At the first Assembly in 2000, we heard atomic bomb survivors say, "We want to see nuclear weapons abolished in our lifetime." Since then, ten years have passed without their wish being realized. Hearing again the

voices of survivors, we renew our resolve to achieve a world without nuclear weapons. Their stories remind us of the suffering of victims created at the every stage of the nuclear cycle from uranium mining to weapons production and testing.

With this in mind we must act on the opportunities provided by:

- \* The five-point plan for nuclear disarmament proposed by UN Secretary-

General Ban Ki-moon on United Nations Day, 24 October 2008;

- \* The tidal-wave of hope inspired by US President Obama's April 2009 speech in Prague, and the joint statement of US President Obama and Russian President Medvedev in April 2009 pledging to work for nuclear stockpile reductions and supporting the goal of a nuclear-weapons-free world;

- \* The change of government in Japan and the subsequent statements by Prime Minister Hatoyama and Foreign Minister Okada calling for sole-purpose nuclear doctrines, negative security assurances and advocating for a regional nuclear weapon free zone;
- \* The announcement by German Foreign Minister Guido Westerwelle recommending the removal of US nuclear weapons from the territories of NATO states as a step in reducing the role of nuclear weapons in NATO.

Nuclear weapons are the ultimate threat to life and the environment and the most extreme violation of human rights. They are dangerous in anyone's hands and any use would be a crime against humanity. We call upon governments, in cooperation with civil society, to launch the process of abolishing nuclear weapons in a visible manner. To that end, the Review Conference of the Nuclear Non-Proliferation Treaty (NPT), to be held in May 2010, provides a critical opportunity to achieve this goal.

Bearing this in mind, we advocate the following actions:

1. Establishment of a process, involving like-minded countries and representatives of civil society, to undertake preparatory work on a treaty to prohibit and eliminate nuclear weapons. Such a process should be organized with reference to the five-point proposal for nuclear

disarmament advanced by UN Secretary-General Ban Ki-moon, which includes a call on states to commence negotiation on a nuclear weapons convention or package of agreements. The Hiroshima - Nagasaki Protocol, launched by Mayors for Peace at the 2008 NPT Preparatory Committee meeting in Geneva, also advocates such a process. We call on the 2010 NPT Review Conference to agree to this.

2. All states possessing nuclear arsenals should halt research, development, testing, and component production while reductions of arsenals are in progress, not afterwards, with production and research facilities subject to an intrusive verification regime at the earliest possible time. States should reduce nuclear weapons in a manner that supports general disarmament, and the financial and human resources currently used to develop and maintain nuclear weapons systems should be redirected towards meeting social and economic needs consistent with the United Nations Millennium Development Goals.

3. Increased citizen involvement in nuclear disarmament, including through campaigns and activities of Mayors for Peace, Parliamentarians for Nuclear Nonproliferation and Disarmament (PNND), Abolition 2000 Global Network, the International Campaign to Abolish Nuclear Weapons (ICAN) and others. We support nonviolent actions to

oppose nuclear weapons, including direct action at nuclear weapons facilities. We encourage greater participation of youth in such campaigns and activities.

4. Creation of more nuclear weapons free zones or zones free of weapons of mass destruction, or single state nuclear weapons free zones, in regions of the world including the Middle East, Northeast Asia, Europe, South Asia and the Arctic. Nuclear weapon free zones provide a practical means for reducing the role of nuclear weapons in security doctrines and decreasing the threat of nuclear weapons being used in the regions covered by the zones, and provide a realistic alternative to reliance on extended nuclear deterrence. In particular, we call on the governments of Japan and South Korea to prepare and publicize plans for creating a Northeast Asia Nuclear Weapon-Free Zone. This would create a favorable environment for promoting the six-party talks designed to denuclearize the Korean Peninsula.
5. Bring world leaders, including U.S. President Obama, to Hiroshima and Nagasaki to meet survivors and see for themselves the consequences of the use of nuclear weapons, which continue through the lives of survivors and subsequent generations. It is essential to continue to impart the

experiences of A-bomb victims in all their aspects to people all over the world. In this matter, Japan as the only country to have suffered atomic bombing, has a unique contribution to make.

To the leaders of the nations that have nuclear weapons and those that wish to have them, we address our final comments to you:

Surely you are aware through literature and films of the enormous destructive power of the atomic bombs that destroyed Hiroshima and Nagasaki. While you may believe that nuclear

weapons serve your national security interests and elevate your prestige, you have not personally experienced the effects of an atomic bomb explosion. The fact is that tens of thousands of innocent citizens were obliterated instantly under those mushroom clouds, that people who did not die instantly died after writhing in agony, covered in blood or burned in fire, and that people who narrowly escaped death had to suffer from radiation-induced illnesses for the rest of their lives.

You cannot be proud of possessing nuclear weapons or seeking to have them in the

future. It means that you are conspirators in a shameful offence against humanity. From Nagasaki, an atomic bombed city, as global citizens, we demand that you take immediate steps towards the realization of a world without nuclear weapons.

February 8, 2010

The 4th Nagasaki Global Citizens' Assembly for the Elimination of Nuclear Weapons [held from 6 -8 February 2008]

[Source:

<[http://www.wagingpeace.org/articles/db\\_article.php?article\\_id=35](http://www.wagingpeace.org/articles/db_article.php?article_id=35)>.]



## VI. India and Global Nuclear Disarmament

Achin Vanaik\*

I would like to start by thanking my hosts for inviting me to this important conference and giving me an opportunity to share my thoughts with you. My brief, as I understand it, is to try and give some idea of where India, especially after the Indo-US Nuclear Deal, stands with respect to the issue of an incremental approach towards total nuclear disarmament involving for example, measures like the CTBT, FMCT and other interim measures that would move us further along the road we need to go on. Because of India's nonaligned past and the early Nehruvian period when India did play a serious role with respect to global nuclear disarmament there has been a marked tendency worldwide among disarmament activists and organizations to give

insufficient weight to the cynicism and duplicity of India's ruling and now nuclear elite. Even after its first test of 1974 when India embarked on a policy of nuclear ambiguity the Rajiv Gandhi Action Plan of 1988 was seen in a wholly positive light when it actually represented a combination of perspectives. This Plan reflected both a certain and genuine commitment to global disarmament and a more cynically motivated cover-up for India's own posture as a nuclear threshold power determined to maintain the nuclear option for the foreseeable future. Indeed both Mrs. Gandhi and Rajiv Gandhi did at particular times consider following up on the 1974 tests but ultimately decided that keeping the option open without further testing was the

safest bottom-line position. The alacrity with which all parties including the Congress, but barring the Left, soon enough accepted and endorsed the 1998 tests and India's status as a de facto nuclear weapons state (NWS), as well as the Indo-US Nuclear Deal, should itself be proof enough of how far today's Indian nuclear elite has travelled from its own past.

1. This Deal, shamefully endorsed by the IAEA and the member countries of the Nuclear Suppliers Group (NSG) as well as others outside it, expresses three things. It consolidates the strategic alliance between India and the US in which ever closer relations between India and Israel are a crucial constituent

element. It facilitates India's efforts to build a strong nuclear arsenal which now means developing a triadic system of deployment including a submarine based nuclear arm, since it frees its own indigenous uranium resources for military use while simultaneously allowing for uranium and technology imports for civilian nuclear use. In effect, international legal frameworks like the NPT and the NSG have been violated in order to reward the subverter, India, all in the name of a new realism that claims it is better to bring India into the international fold than to leave it outside. What this all means of course is a) that what the US wants it gets, and non-proliferation and nuclear restraint are to be pursued selectively and hypocritically with pressure on at least some large section of disarmament activists to more or less fall in line on the grounds that selectively, hypocritically and dishonestly applied pressure on certain targets to not proliferate is better than nothing; b) an enhanced and accelerated nuclear capability for India via this Deal means a ratcheting up of the nuclear arms race between India and Pakistan which understandably is most unhappy about the implications of this Deal.

2. One aspect of this Deal is that it makes it much more difficult for India to oppose US nuclear initiatives on issues such as the CTBT and

FMCT. Given Obama's effort to push for a CTBT (even as he will most likely have to partially undermine its purpose by sanctioning in other ways further development of a new generation of weapons by his domestic nuclear weapons establishment) a section of the Indian bomb lobby has come out declaring that the H-bomb test in 1998 was a fizzle implying that India should not bind itself to a future CTBT but leave open the possibility of carrying out future tests. However, if the Obama administration secures the necessary support from the US Congress for ratification, he can then expect to successfully pressure both India and Pakistan to join the CTBT. Pakistan worried by the implications of the Indo-US nuclear Deal and thinking that its nuclear arsenal is also a deterrent vis-à-vis Indian conventional military superiority has publicly resiled from its earlier pre-1998 willingness to join the CTBT if India also did. However, Islamabad's capacity to resist US pressure on this count today is even less than that of New Delhi. The dominant view among India's nuclear elite is that if push comes to shove on this score from Washington then India had best go along but bargain as hard as it can for compensations such as information sharing from existing US test data and possible other foreign policy goodies like support for a

permanent seat in the Security Council.

3. On the FMCT, Indian calculations are that negotiations aiming to reach a final agreement will even in the best of circumstances take a lot of time, during which time it can look to substantially increase its stockpiles of fissile materials to the point where it may not have to worry if a production cut-off takes place. In any case except for Pakistan none of the other NWSs are in favour of addressing in some serious way the issue of reducing stockpiles, and without stockpiles being meaningfully addressed an FMCT should be seen by us disarmament activists for the farce it essentially is. India's current officially declared posture on the FMCT is that it will participate in the negotiations over it but will not accept obligations that hinder its "strategic programme". In short, India will adopt a low profile diplomatic posture of wait-and-see. It gains nothing from showing obduracy and gains a great deal (especially in respect of its all-important relationship with the US) by showing a cautious, reserved and carefully qualified willingness to cooperate on this issue.
4. On matters such as the US's Ballistic Missile Defense (BMD) system and its associated Theater Missile Defense (TMD) programmes or its



arrogantly illegal Proliferation Security Initiative (PSI), India will simply follow the US lead. Just how the US will proceed on this and other fronts as well as more generally on nuclear restraint and disarmament measures (e.g. START III) will only become clearer after it releases its Nuclear Posture Review presumably some time in Spring 2010. There has been some talk that the US might be willing to consider a No First Use (NFU) agreement among NWSs. This is one area where India should be pressured to take a more aggressive public stand which after all is in accordance with its own policy, although its version of an NFU is weaker than that of China since it does not preclude Indian first use against countries having non-nuclear weapons of mass destruction or against non-nuclear countries allied to NWSs. But the point is that we need to find the points where India might be pushed to diplomatically behave in ways uncomfortable to the US, despite its strategic alliance. Two other pressure points in this respect also come to mind. One is the issue of de-alerting proposals for all the existing NWSs especially Russia and the US. India has in the recent past put forward in international forums just such proposals. The other area is that of negative security assurances where again the US along with others has been at fault.

5. Insofar as India seeks to portray itself as being some kind of more 'responsible' nuclear power, these policy differences between itself and the US in particular, should be made use of for purposes of generating international diplomatic pressure. Thus India repeatedly calls for moving towards a timetable for global nuclear disarmament as something consistent with its own legacy of the Rajiv Gandhi Plan. Of course this is a cover up for it refusing to consider for itself serious regional (South Asian) nuclear restraint and disarmament proposals as necessary intermediate steps towards global abolition, i.e. its dishonest espousal of a "big bang" approach to disarmament. But this only means that we must make use of the gaps between declared and actual policies whenever we can explore whether India might be willing to participate in efforts at beginning a process of global discussions with non-nuclear weapons states even if the US, France, UK, Russia were to stay out of such discussions, since India, China, North Korea and Pakistan are the four NWSs which have stated their commitment to a Nuclear Weapons (Abolition) Convention.

We also need to raise various regional restraint and disarmament perspectives with the direct purpose of embarrassing and pressuring

India by exposing its duplicities to a wider domestic, regional and international public. In this regard we need to take up the issue of promoting a Middle East Weapons of Mass Destruction Free Zone (MEWMDZFZ) and to propose specific proposals that move in the direction of demilitarizing and denuclearizing South Asia.

6. Given the current hysteria about Iran and the longstanding determination of Israel, abetted by innumerable allies, to sustain and deepen its regional military-political dominance by any means, the Middle East is a very dangerous potential nuclear flashpoint. We must not become part of the attempt by the US and its allies to isolate and squeeze Iran for reasons that go well beyond the specifically nuclear issue even as it deliberately uses this issue to hide its larger ambitions. More than ever this is the time to push as consistently, continuously and as hard as we can, for a MEWMDZFZ which, incidentally, all the 22 members of the Arab League of nations, as well as Iran, have long supported. The biggest obstacle to the emergence of such a zone is in fact Israel and its principal backer the US. In a deliberate strategy of what can be called 'international filibustering' Israel demands the unacceptable - that it will not relinquish its nuclear capabilities by joining such a zone before the establishment of the kind of overall 'peace'

settlement that it wants, which of course can only be of a kind that would be deeply unjust to the Palestinians. The natural and powerful reasonableness of the idea of a MEWMDFZ as the way to permanently and quickly defuse nuclear tensions in this region and to become a powerful input into dramatically reducing political tensions in the region for the medium and longer term is so obvious. As such, the call for the early and unconditional establishment of such a zone has the capacity to resonate deeply and widely throughout the world's public despite the hypocrisies of innumerable governments from those in North America to Europe to India and Japan on this issue.

7. Finally, what are the more specific incremental measures for South Asia that we need to push for and make part of the international public discourse? I will end this presentation by simply listing them though I hope there will be further discussion on them in this audience.

(i) India calls on Pakistan to accept a NFU which it refuses while Pakistan calls on India to accept a No War Pact which it refuses. So let us propose a simultaneous agreement on both by both countries!

(ii) Call on both governments to declare the whole of Kashmir on both sides of the border a NWFZ! Since both governments get irritated that other countries worry about Kashmir being a "nuclear flashpoint" this is a great way of reducing such fears and scoring a powerful political-symbolic point internationally with no practical cost in respect of nuclear preparations or deployments since neither country anyway has nuclear weapons stationed on their sides of Kashmir nor intends to do so in the future. Let both New Delhi and Islamabad embarrass themselves publicly by trying to explain why neither likes this idea. Incidentally there is already one political party - the All Jammu and Kashmir Muslim Conference in Pakistan occupied Kashmir that has publicly endorsed this call.

(iii) Civil society groups and delegations as well as governments should approach Bangladesh to discuss seriously the stretching of the Bangkok Treaty (Southeast Asian NWFZ) to include Bangladesh, which is also the only country in South Asia that has the courage to formally and publicly call for (to the irritation of Pakistan and India) a South Asian NWFZ. Such a stretching would represent a valuable transitional measure to this end that publicly pressures the two nuclear powers.

(iv) This is also the time for civil society organizations/groups / delegations as well as official governmental representatives to approach Nepalese political parties to suggest that Nepal include in the Constitution it is collectively seeking to prepare, the declaration of itself as a single state nuclear weapons free zone a la Mongolia. There are good reasons to believe that the Maoists certainly (but not only them) could see real value in such a political move as a way of asserting its independence in a way that both India and Pakistan would find almost impossible to publicly oppose.

We must think creatively and act energetically. Thank you for listening to me.

\* The author is currently the Head of the Department of Political Science and Dean of Faculty of Social Sciences in the Delhi University. A Fellow and a member of the Board of Directors of the Transnational Institute ( TNI), Amsterdam, Netherlands. Authored a number of books and articles. A co-recipient of the International Peace Bureau's Sean McBride International Peace Prize for 2000 with Praful Bidwai. An NCC member of the CNDP.

[Note: This is the text of the speech delivered by the author at the 4th Nagasaki Global Citizen's Assembly which met from Feb. 6 to 8th, 2010.]



## D. Nuclear Power Worldwide

### I. Nuclear power losing in importance world-wide

**T**HE world-wide renaissance of nuclear power that has so often been predicted will not take place in the next few decades. Nuclear energy will be on the decline till the year 2030, and will continue to decline in importance globally.

This is the conclusion of the Swiss "Prognos" institute based in Basel. Germany's Federal Agency for Radiation Protection in Salzgitter / Lower Saxony commissioned "Prognos" to carry out a survey on "the renaissance of nuclear energy". The task was to provide a realistic estimate of the future development of nuclear energy world-wide till the year 2030. The most important results are reproduced below:

#### **No renaissance - nuclear power in decline**

- \* The study does not anticipate a renaissance in the use of nuclear energy by the year 2030. On the contrary, shutdowns of aged plants will lead to a decrease in the total number of reactors, and there will be a significant decline in installed capacity and electricity generation from nuclear power plants.
- \* Compared to the reference level of March 2009, the number of nuclear power stations in operation worldwide is likely to decrease by 22% by the year

2020, and by about 29% by the year 2030.

- \* Despite an increase in construction activity of nuclear power stations compared to construction in the last 10 years, the level of the building boom of the 1970s/80s will not be reached again.

#### **Almost 30% fewer nuclear power stations by 2030**

- \* Although the number of announcements of new nuclear power stations is on the increase, in the past the ambitious expansion plans - particularly in the USA, but also in other countries - have subsequently not materialized. The study anticipates that about 23% of all the projects announced by ATW, the German "International Journal for Nuclear Power" for the period until 2020 will be realized, whilst about 35% of the projects announced by the World Nuclear Association (WNA) for the period until 2030 will be realized.
- \* The forecast will be impacted particularly by the assumptions made with respect to the remaining lifetime of existing nuclear power stations and the extent to which the announcements made by China, Russia, the USA, India and Japan are implemented.

- \* If all the projects announced were to be realized, this would mean an increase in construction activity that would overshadow the rapid increase in construction activity at the beginning of the 1970s. This seems extremely unlikely at the present time.

#### **Nuclear energy in decline**

- \* Even by comparison to the forecast rapid growth in world-wide electricity consumption, nuclear energy will decline significantly in importance by the year 2030. The percentage of world-wide electricity generation accounted for by nuclear energy will decline from 14.8% in the year 2006 to an estimated 9.1% in the year 2020, and to 7.1% in the year 2030.
  - \* Other scenarios - such as the "low" scenario of the OECD/Nuclear Energy Agency and the reference scenario of the World Energy Outlook 2008 by the International Energy Agency - also indicate that nuclear energy will have a declining share of world-wide electricity generation. The development of output forecast in this study is most closely aligned with the results of the current "phase out life extension" scenario of the OECD-NEA.
- The background: there are

currently 436 nuclear power stations in operation, whose average age is already 24 years. The number of reactors has been declining since the year 2002, when there were still 444 reactors connected to the grid. However, many construction projects are now getting bogged down, and work on several of them has been stopped for years. In actual fact, there are only 37 new nuclear reactors currently under construction. This will not be enough to compensate for the decline world-wide.

### 436 nuclear reactors world-wide

The media have reacted with glee to the completely contrary results arrived at by the "Prognos" researchers

compared to the construction boom predicted for nuclear power stations that has never actually come to pass. "Süddeutsche Zeitung", for instance, gloated: "The mythical renaissance of nuclear power." Everything has been prepared for the big comeback of nuclear power that will never even take place!

There are plans as far as the eye can see. Poland is looking for a site for a new nuclear power station, possibly not far from the German border. Switzerland is intending to build new reactors. The United Kingdom has invited investors. Italy has overturned its exit from nuclear power, as has Sweden. A new reactor is under construction in Finland, and in France too.

Everything seems to have been prepared for the big renaissance of nuclear power. But only in theory. In reality, the role played by reactors will decline over the next few years. Many nuclear projects world-wide are already at a standstill. In view of the growing financing problems and political instability, only a third of the planned new projects will be realized world-wide. At best. And wherever construction is under way, there are also problems, the "Süddeutsche" continues. Many projects that were thought to be dead certs are about to be cancelled.

[Source:  
<<http://www.wieninternational.at/en/node/16702>>.]



## II. Apology to the Earth for Nuclear Bombs and War Mary Hamer, M.D

**PURPOSE:** This Apology to the Earth essay Part III explores the negative impact of humans on the Earth by Nuclear Technology & War. Apology to the Earth Parts 1 & 2 focused on Human Cruelty to Animals & Humans, respectively. (1) (2) The key sections of the Part III Nuclear Technology discussion are: Nuclear Bombs, Hiroshima & Nagasaki , Nuclear Power, Nuclear Waste, Radiocide, Nuclear Waste Marker Systems,

Nuclear Accidents, Radiation Sickness, Nuclear Bomb Testing & Earthquakes & Nuclear Language. The main sections of the War discussion are: Ecological Footprint of War, Negative Consequences of War & Ecocide. The Conclusion section includes the Apology, a Recommendation for World Peace, a Thank you to South Africa & Comments on Human Motivations for Nuclear Technology & War.

### I. NUCLEAR TECHNOLOGY

\* NUCLEAR BOMBS, etc.

**Trinity:** On July 16 th 1945 at 5:29 AM in the New Mexico desert, the human race exploded the first nuclear bomb on the planet Earth called Trinity. Einstein said: "I made one great mistake in my life ... When I signed the letter to President Roosevelt recommending that atom bombs be made". (3) In

my opinion, man-made nuclear technology was the worst event of all time for life & the planet Earth. Humans say they are the Superior species; Yet in my opinion, the invention of nuclear bombs, nuclear power plant-generated nuclear waste & other nuclear technology makes humans the most Violent & Irresponsible species of all. Nuclear bombs, nuclear testing, nuclear power & depleted uranium threaten world peace & they are polluting the Earth in a severe, widespread, expanding, & long-term manner.

**\* HIROSHIMA & NAGASAKI : OPPOSITION TO THE ATOMIC BOMBING:**

"The role of the bombings in Japan 's surrender & the United States ' ethical justification for them has been the subject of scholarly & popular debate". Those who oppose the bombings argue that it was ... "Militarily unnecessary, ... immoral, a war crime, or a form of state terrorism". (4)

\*Wikipedia outlines the Opposition to the Hiroshima & Nagasaki Atomic Bombings including the following categories: Fundamentally Immoral, The Bombings as War Crimes, State Terrorism, Militarily Unnecessary, Nagasaki Bombing Unnecessary, Racism & Dehumanization. ( 5)

\* **Eisenhower stated:** " Japan was already defeated & ... dropping the bomb was completely unnecessary ... Our country should avoid shocking world opinion by the use of a weapon whose employment was ... no longer mandatory as a measure to save

American lives". (6)

\* **Genocide:** Were the Hiroshima & Nagasaki atomic bombings a form of genocide? - Whereby genocide is defined by the United Nations as: "Acts committed with (the) intent to destroy, in whole or in part, a national, ethnic, racial or religious group" (7)

\* **War Crimes:** Szilard states: "Suppose Germany had dropped one bomb say on Rochester & the other on Buffalo ... Can anyone doubt we would then have defined the dropping of atomic bombs on cities as a war crime & that we would have sentenced the Germans ... to death at Nuremberg & hanged them?" (8) War crimes are defined as: "Violations of the laws or customs of war", including "Murder" & "The wanton destruction of cities, towns & villages" (9)

\* **Racism:** President Truman's Diary entry on 8/11/45 states: "The only language they (the Japanese) seem to understand is the one we have been using to bombard them. When you have to deal with a beast you have to treat them like a beast". (10) Racism is defined as: "The prejudice that members of one race are ... superior to members of other races" & "Abusive behavior towards members of another race". (11)

\* **Ego:** Was the U.S. ego the cause for the bombings: -- for the Shock & Awe effect

on Russia ? Selden states: "Impressing Russia (with the atomic bomb) was more important than ending the war (with) Japan ". (12)

\* **Just War Principles:** Did the U.S. follow "Just War" principles for the atomic bombing of Hiroshima & Nagasaki including Right conduct during War such as: Avoiding bombing civilian residential areas, Avoiding excessive civilian injuries, & Using minimum force. (13)

\*The Bomb that Saved Lives: The U.S. military believed that the bombing of Hiroshima & Nagasaki would "Save Lives". The truth is that these bombs that "Saved lives": Acutely killed 90,000 -166,000 Japanese people in Hiroshima & 60,000 - 80,000 people in Nagasaki . (14)

**\*NUCLEAR POWER: DIRTY, EXPENSIVE & NOT SO GREEN & YES NUCLEAR POWER DOES CONTRIBUTE TO GLOBAL WARMING:**

1. **\*Nuclear Power is Not Clean or Green:** Helen Caldicott states: "Not only is atomic energy inefficient, but it adds to greenhouse gas emissions while releasing deadly radiation for countless generations". (15)

2. **Nuclear Power Uses Fossil Fuels:** Helen Caldicott states in her article: Nuclear power is the Problem, Not a solution: "The nuclear fuel cycle uses large quantities of fossil fuel at all of it's stages -The

mining & milling of uranium, the construction of the nuclear reactor & cooling towers, robotic decommissioning of the intensely radioactive reactor at the end of its...lifetime, & transportation & long-term storage of massive quantities of radioactive waste".

Caldicott summarizes: "Contrary to the nuclear industry's propaganda, nuclear power is therefore not green & it is certainly not clean". (16)

3. **Nuclear Power is Expensive:** The costs of nuclear electrical power are 10-15 cents/kWh compared to 5-12 cents/kWh for wind electrical power & 6-8.3 cents/kWh for coal electrical power. (17) "A new study puts the generation costs for power from new nuclear power plants at 25 to 30 cents/kWh - triple current electricity costs". (18)

- \* **CO2 Emissions:** Ben Williams details the significant emissions caused by the many steps of nuclear power production including: "Diesel burned in (mining uranium) ore", "Diesel burn(ed) in shipping the heavy rock to processing", "The (uranium) mill burns up millions of KWh every year", "Shipping the yellow cake to market", Spent nuclear fuel rod & other nuclear waste disposal, etc. (19) Maintaining & decommissioning nuclear power plants also produce emissions.

- \* **Significant Heat**

**Emissions:** Nordell & Gervet's research reveals a "Flaw in the nuclear energy argument"; Nordel states: "Although nuclear power does not produce carbon dioxide emissions in the same way as burning fossil fuels, it does produce Heat emissions equivalent to 3 times the energy of the electricity it generates & so (it) contributes to global warming significantly". (20)

- \* **NUCLEAR WASTE:** The Nuclear Information & Resource Service states: "The majority of high-level radioactive waste is ... from ... nuclear power plants". "On-reactor-site fuel pools hold most of the high-level waste". "Fuel pools were not designed for more than temporary storage". Once "Reactors ... have reached pool capacity, (nuclear waste is stored in) dry casks". "There are many hazards associated with fuel pools" & dry casks. (21) "Areas currently being evaluated for storage of (high-level) nuclear waste are Space, under the sea bed & large stable geologic formations on land". (22) When nuclear power companies advertise how "Clean" & "Green" their nuclear industries are, then why don't these companies honestly talk about real issues such as the significant problems associated with high-level radioactive waste disposal?

- \* **RADIOCIDIC:** \*I define the neologism: Radiocide to describe the criminal act of willfully & recklessly with

depraved indifference or negligently causing harm to people, animals & the Earth as a result of nuclear technology activities such as: uranium mining & milling, nuclear radioactive waste, radiation accidents, etc. -- & including failure to follow standards of care regarding nuclear safety & clean-up. Responsible stewardship of the planet Earth & nuclear technology includes application of the Precautionary Principle: "If an action or policy has (a) suspected risk of causing harm to the public or to the environment, in the absence of a scientific consensus (about the harm), the Burden of proof falls on those who would advocate taking the action". Other definitions of the precautionary principle include: "Caution in Advance".(23) A key element of this principle is that: "Decision makers (need) to anticipate harm before it occurs". (24) If Nuclear Technology specialists, government leaders & citizens do not know how to deal with the negative consequences of a problem such as nuclear waste, then it is important that they Not engage in such activities - That is until they know how to properly & safely dispose of such waste - with a high probability of success. World leaders, heads of state & nuclear companies are taking big risks with nuclear power, nuclear weapons & nuclear waste on behalf of humans, animals, the Earth & future generations.

## \*NUCLEAR WASTE MARKER SYSTEMS:

Experts have convened to design a 10,000 year marker system(s) to warn future generations of highly dangerous nuclear waste sites. The goal is to communicate: Danger, this is not a place of honor, this is a place to be shunned. Graphics include human faces showing horror & sickness. Marker designs include jagged & rough shapes that communicate danger & harm to the body such as Spike fields, landscape of thorns, menacing earthworks & forbidding blocks. (25) It is a tragedy that humans are irresponsibly dealing with nuclear technology & waste and that we have to warn future generations of our disastrous mistakes.

## \*NUCLEAR ACCIDENTS:

\* **Chernobyl Man-Made Environmental Disaster: The Chernobyl Nuclear power plant disaster of 1986 is called by Izvestia as:** "The greatest technological catastrophe in world history". (26)

\* **How much radiation was released by Chernobyl ?:** Estimates of the radiation released from Chernobyl range from 50 Million curies to 4.5 Billion curies of radiation. (27) :The World Health Organization (WHO) has estimated that the total radioactivity from Chernobyl was 200 times that of the combined releases from the atomic bombs dropped on Hiroshima & Nagasaki". (28)

\* **Causes of the Chernobyl Nuclear Accident:** "The

IAEA's 1986 analysis (of the Chernobyl nuclear accident) attributed the main cause of the accident to the operators' actions. But ... the IAEA (1993) report, a revised analysis, attributed the main cause to the reactor's design".(29)

\* **Health Effects on Humans:** "About 30,000 to 60,000 excess cancer deaths are predicted" as a result of the Chernobyl nuclear accident. (30) "Thyroid cancer is caused by Iodine-131, which comprised 10 to 15% of Chernobyl's fallout. ... The UN estimated the number of thyroid cancers among children in Belarus - Where 70% of the fallout landed - At 285 times the pre-Chernobyl number". (31)

\* **International Spread of Radioactivity:** The Chernobyl nuclear accident discharged & dispersed radionuclides "Across many parts of Europe & later the entire Northern hemisphere". (32)

\* **Zone of Alienation or Zone of Exclusion:** The Chernobyl Zone of Alienation is an exclusion zone of radiation contaminated land around the Chernobyl nuclear power plant. "Residential, civil or business activities in the zone are legally prohibited & punishable". (33)

\* **The Red Forest :** The Red Forest is in the Chernobyl Zone of Alienation. The

name Red Forest comes from the (red) color of the pine trees after they died following the absorption of high levels of radiation from the Chernobyl accident. The "Red Forest remains one of the most contaminated areas in the world today". (34)

\* **RADIATION SICKNESS & Other Exposures to Radiation:** Radiation sickness (Radiation poisoning, Radiation injury) is defined as: "The complex of symptoms resulting from excessive exposure to the whole body to ionizing radiation". (35) Causes of radiation poisoning include: the Hiroshima & Nagasaki atomic bombs, Nuclear reactor accidents such as Chernobyl , Nuclear experiments, Processing of nuclear materials, Nuclear terrorism, etc..

\* **In 1945 a Los Alamos physicist Harry Daghlian was exposed to an extremely high dose of radiation during an experiment. Detailed medical records were made of his fatal condition including signs & symptoms such as:** Nausea & vomiting, fever, red skin, skin blisters, blue nailbeds, increased heart rate, hair loss, abdominal pain, weight loss, diarrhea, etc.. Daghlian died 25 days after the incident. Sadly, Daghlian's death certificate & the media reported the cause of death to be "Severe/Chemical burns" - Rather than radiation-induced injuries. (36)

\* **In 1958 Cecil Kelley, a Los Alamos employee, was exposed to a high dose of radiation as the result of a plutonium accident. Radiation effects he experienced included:** Shock, red skin, vomiting, blue lips, chills, uncontrolled movements, anxiety & restlessness. Kelley died just 35 hours after the accident. (37)

\* Karen "Silkwood was a chemical technician at the Kerr-McGee Plutonium fuels production plant in Oklahoma & a member of the ... Workers' Union ... Silkwood was reportedly gathering evidence for the Union to support her claim that Kerr-McGee was negligent in maintaining plant safety ... (Silkwood) was involved in a number of unexplained exposures to plutonium." "Silkwood died in 1974 in a fatal one-car crash". (38)

### **\*NUCLEAR BOMB TESTING & EARTHQUAKES:**

Whiteford studied earthquakes before nuclear testing & after nuclear testing: "In the fifty years before testing, large earthquakes of more than 5.8 occurred at an average rate of 68 per year. With the advent of testing the rate rose 'suddenly & dramatically' to an average of 127 a year. The earthquake rate has almost doubled" as a result of nuclear bomb testing. Some studies warn that "Nuclear tests are weakening the earth's crust triggering earthquakes & causing the earth's pole to shift". Shigeyoshi Matsumae, President of Tokai Univ. Department of Aerospace

Science states: "Earthquakes & fluctuations of the earth's axis are related in a direct cause-and-effect to testing of nuclear devices". "In 1991, the Nuclear Age Peace Foundation published Whiteford's findings in an article called: 'Is Nuclear Testing Triggering Earthquakes & Volcanic Activity?'" (39) Are humans causing earthquakes, volcanic activity, (tsunamis) & a shift of the Earth's axis due to nuclear testing? Should nuclear agencies, governments & nuclear corporations conducting nuclear testing be held accountable for the negative effects of these tests on the planet Earth?

### **\*NUCLEAR & Other WAR LANGUAGE :**

The human race uses Nuclear & other War language in everyday conversation such as: Nuclear option, To nuke something, To be radioactive, Nuclear explosion, Something bombed, Da bomb, etc. (40) (41) (42) What is being communicated to other people & other countries with the use of such language? What kind of misleading thoughts could these nuclear metaphors, hyperboles, slang, etc. cause? -- A Mushroom cloud?

**VIOLENCE:** Violence begets violence -- & Violent language begets violent actions. Sure, this nuclear language is just a figure of speech. But, as the neurons in our brains grow & form synaptic "Nuclear" connections, are we pre-wiring our thoughts to be "Prepped & ready" to pull a Nuclear trigger?

**MOTIVES:** What are the motives for the use of Nuclear language?

#1. Power & Control? Domination of an Enemy?

#2. Advertising/Marketing strategy? -- To draw attention to an issue with Emotional Drama?

#3. Entertainment Value: Using a Funny sound bite or Glitzy wordplay?

#4. Attraction to Nuclear War?

#5. Sadistic Death Wish?

#6. Or in George Orwell's terms: (Are) "Noises coming out of (our) larynx, but (our) brain(s) (are) not involved?" (43)

### **\*INTERNATIONAL Confusion with Nuclear & Other War Language:**

What do the Japanese Hiroshima & Nagasaki citizens think of the U.S. use of nuclear language? When Al Qaeda or the Iranian or North Korean governments hear our Nuclear & other war metaphors, what do they think? Is it really clear that the U.S. is talking about a figure of speech rather than a Nuclear attack?

\* **Familiarity Breeds Contempt & Numbing Effect:** How many times has the world's collective consciousness heard people carelessly use Nuclear & other war language? - 10 times, 500 X, a Million times? Repeated use of such a phrase could have a numbing or zombie-like effect on our psyches and make the idea of "Nuclear" & War as familiar as paying taxes or getting a parking ticket or going through a



traffic intersection. There's nothing routine or average or common about: a Nuclear bomb blast, thermal radiation, an electromagnetic pulse or ionizing radiation - Or any kind of a bomb explosion. (44)

\* **RATIONAL THINKING:** Why can't we use simple words to communicate with others? Or on a higher level, why can't we envision peaceful co-existence with the world including a Win-win negotiation approach to problem-solving -- rather than using adversarial, antagonistic, violent methods of solving conflicts? Sure, realistic terms & ideas are less sensational than nuclear language, but simpler terms are more honest. Accurate words promote better communication & better relationships.

\* **Language of PEACE rather than War:** Why can't we speak a language of peace rather than the language of war? Why can't we speak in an open, honest language of unity, equality & tolerance -- Rather than use words of domination, separation & emotions? We all have a duty to use language responsibly. Language is powerful. May we all choose and use our words wisely.

## II. THE CONSEQUENCES OF WAR:

Nuclear bombs are an example of the human choice to solve conflicts with war & weapons.

Let's explore the general consequences of this human decision to solve differences with Violence. What are the consequences of war on human society, the environment, future generations, the planet Earth?

**1. ECOLOGICAL FOOTPRINT OF WAR:** "Ecological footprint is a measure of human demand on the Earth's ecosystems. It compares human demand with (the) planet Earth's ecological capacity to regenerate (from natural resource use & waste production). (45) What is the ecological footprint of a bomb? How many units of human energy and carbon dioxide units are transferred from peaceful activities (health & safety, medical care, education, rule of law, etc.) to the mining, human labor, transportation, factory work, advertising & the sale of a war bomb?

**2. NEGATIVE CONSEQUENCES OF WAR:** How many humans are killed & injured due to war? How many birth defects occur as a result of the toxic aftermath? How does war affect the human psyche? How many cases of post-traumatic stress disorder (PTSD) & traumatic brain injury (TBI) occur as a result of war? How many humans deteriorate into a life of poverty & crime after war? - as a result of depression, PTSD or TBI? How many people commit suicide due to war? What are the consequences of these bombs on future generations psychologically, genetically, environmentally? What is the effect of the noise pollution of war: e.g. bombs exploding, guns firing, tanks

rolling, etc. on humans & animals? How many schools, hospitals, electrical plants, water treatment plants, bridges, roads, agricultural businesses and other infrastructure are destroyed by war? How does war contribute to climate change as a result of CO2 emissions? How many habitats are destroyed because of war? What is the total cost of war to the planet Earth? - including financial, psychological, medical, generational, & ecological costs? - in the Millions, Billions or Trillions of dollars?

**3. ECOCIDE:** Ecocide is defined as: "The complete destruction of an ecosystem due to human activities. It may result from exploitation of resources, nuclear warfare or the dumping of harmful chemicals". (46) What ecosystems & natural resources are destroyed/damaged/depleted by war? What is the Air/land/water Quality index after war? How many animals are killed, injured or displaced as a result of war? Are any species made extinct by war? What is the "Living planet index" (47) for biodiversity after war? Does war cause any seismic activity? What are the radioactivity levels in humans, animals & in the environment after war due to Depleted Uranium (DU) use? Overall, what are "The Environmental Costs of Militarism"? including "Fuel emissions, radioactive waste & defoliation campaigns"?; What is "The relationship between militarism & ecological destruction"? (48)

**4. QUESTIONS:** Should war aggressors be responsible for not only human death & injury,

but also environmental destruction to the Earth? Who is responsible for the clean-up of the battlefield after war including the clean-up of Depleted Uranium? Wikipedia cites examples of Health Effects including Toxicity due to Depleted Uranium. (49) Note: The International Coalition to Ban Uranium Weapons "Campaigns for a ban on the use, transport, manufacture, sale & export of all conventional weapon systems containing uranium" (such as depleted uranium). (50) Should the "Polluters pay" for war damages including "Upstream" & "Downstream" impacts? (51)

**5. FINAL COMMENTS ON WAR CONSEQUENCES:** In my opinion, war aggressors should be held accountable for human death & injury, societal losses, infrastructure damage, environmental destruction, animal death & injury, resource depletion, air & land & water pollution, etc. I recommend that the world adopt a 5 th Geneva Convention to protect the Earth "During times of armed conflict" (52)

**\*CONCLUSION: Regarding: NUCLEAR WEAPONS, NUCLEAR POWER & NUCLEAR WASTE**

**\*APOLOGY:** I apologize to the Earth for nuclear bombs, nuclear power, nuclear waste & war.

I apologize for the first nuclear bomb detonation of:

Trinity on July 16th 1945 at 5:29 AM in the New Mexico desert.

The Trinity nuclear bomb marks the beginning of the dark phase of the human race.

Overall, I apologize for Human Wars including Nuclear Bombs.

**\*RECOMMENDATION: EARTH ZONE OF PEACE:**

\*The Dalai Lama proposes a peace plan to make Tibet a Zone of Peace: (53) including:

- The entire Tibetan plateau would be demilitarized.
- The manufacture, testing & stockpiling of nuclear weapons & other armaments on the Tibetan plateau would be prohibited.
- The Tibetan plateau would be transformed into the world's largest natural park.
- The manufacture & use of nuclear power & other technologies which produce hazardous waste would be prohibited.

I propose that the human race make the entire planet Earth a Zone of Peace - similar to the Honorable Dalai Lama's proposal for Tibet - with a ban on nuclear weapons & all nuclear technology & a focus on Nature rather than war.

**THANK YOU: South Africa**

Thank you South Africa for being: "The first ... country to ... entirely dismantle its nuclear weapons programme". (54) David Albright states: " South Africa is the only country to voluntarily give up it's nuclear weapons. ... South Africa 's

abandonment of it's 20 - 30 year old nuclear weapons program remains unique". (55)

**WHAT MOTIVATES HUMANS TO MAKE BAD DECISIONS REGARDING NUCLEAR TECHNOLOGY & WAR?**

I feel humans make bad decisions regarding nuclear technology & war due to: #1. Fear. I believe that the: "Race to make nuclear bombs" & nuclear weapons testing & bombing have been motivated by Fear & Anxiety. #2. I believe that the nuclear power industry's claim that nuclear power is "Green & Clean" is motivated by profits. #3. I believe that officials that claim that depleted uranium is "Safe" is motivated by military interests.

**\*HOMO EARTH:**

After witnessing acts of Human Cruelty to humans, animals & the Earth

-- Due to nuclear technology, human overpopulation & greedy consumption

I withdraw my name from the human race

This Homo Sapien species is far too cruel for me

I declare myself a new species

I am Homo Earth

-- A species that treats humans, animals & the Earth with respect.

-- A species that prefers dialogue -- even with enemies -- rather than nuclear bombs & war.

**\*NEW MANTRA:**

May I do no harm in my life to any living being. May I never inflict pain & suffering on any other being. May no human, no animal, no Earthly entity ever suffer because of me.

Namaste. Salaam. Shalom. Shanti. Peace.

Thank you. Respectfully,  
Mary Hamer, M.D.

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[Source:

<<http://www.countercurrents.org/hammer040110.htm>>.]



## E. Threats of Nuclear Power and Resistance in India

### I. Nuclear Power in India: Snapshots

- India has a flourishing and largely indigenous nuclear power programme and expects to have 20,000 MWe nuclear capacity on line by 2020 and 63,000 MWe by 2032. It aims to supply 25% of electricity from nuclear power by 2050.
- Because India is outside the Nuclear Non-Proliferation Treaty due to its weapons program, it has been for 34 years largely excluded from trade in nuclear plant or materials, which has hampered its development of civil nuclear energy until 2009.
- Due to these trade bans and lack of indigenous uranium, India has uniquely been developing a nuclear fuel cycle to exploit its reserves of thorium.
- Now, foreign technology and fuel are expected to boost India's nuclear power plans

considerably. All plants will have high indigenous engineering content.

- India has a vision of becoming a world leader in nuclear technology due to its expertise in fast reactors and thorium fuel cycle.

Electricity demand in India has been increasing rapidly, and the 534 billion kilowatt hours produced in 2002 was almost double the 1990 output, though still represented only 505 kWh per capita for the year. In 2006, 744 billion kWh gross was produced, but with huge transmission losses this resulted in only 505 billion kWh consumption. The per capita figure is expected to almost triple by 2020, with 6.3% annual growth. Coal provides 68% of the electricity at present, but reserves are limited. Gas provides 8%, hydro 15%.

Nuclear power supplied 15.8 billion kWh (2.5%) of India's electricity in 2007 from 3.7 GWe (of 110 GWe total) capacity and this will increase steadily as imported uranium becomes available and new plants come on line. In the year to March 2010, 22 billion kWh is forecast. Some 300 reactor-years of operation had been achieved by mid 2009. India's fuel situation, with shortage of fossil fuels, is driving the nuclear investment for electricity, and 25% nuclear contribution is

foreseen by 2050, from one hundred times the 2002 capacity. Almost as much investment in the grid system as in power plants is necessary.

### Nuclear Energy Parks

In line with past practice such as at the eight-unit Rajasthan nuclear plant, NPCIL intends to set up five further "Nuclear Energy Parks", each with a capacity for up to eight new-generation reactors of 1,000 MWe, six reactors of 1600 MWe or simply 10,000 MWe at a single location. By 2032, 40-45 GWe would be provided from these five. NPCIL says it is confident of being able to start work by 2012 on at least four new reactors at all four sites designated for imported plants.

The new energy parks are to be:

Kudankulam in Tamil Nadu: two more pairs of Russian VVER units, making 6800 MWe.

Jaitapur in Maharashtra: Preliminary work at is likely soon with six of Areva's EPR reactors in view, making 9600 MWe.

Mithi Viridi (or Chayamithi Viridi) in Gujarat: to host US technology (Westinghouse AP1000).

Kovvada in Andhra Pradesh: to host US technology (GE Hitachi ABWR and/or ESBWR).

Haripur in West Bengal: to

### India's operating nuclear power reactors:

Reactor	State	Type	MWe net, each	Commercial operation	Safeguards status
Tarapur 1 & 2	Maharashtra	BWR	150	1969	item-specific
Kaiga 1 & 2	Karnataka	PHWR	202	1999-2000	
Kaiga 3	Karnataka	PHWR	202	2007	
Kakrapar 1 & 2	Gujarat	PHWR	202	1993-95	in 2012 under new agreement
Kalpakkam 1 & 2(MAPS)	Tamil Nadu	PHWR	202	1984-86	
Narora 1 & 2	Uttar Pradesh	PHWR	202	1991-92	in 2014 under new agreement
Rajasthan 1	Rajasthan	PHWR	90	1973	item-specific
Rajasthan 2	Rajasthan	PHWR	187	1981	item-specific
Rajasthan 3 & 4	Rajasthan	PHWR	202	1999-2000	in 2010 under new agreement
Rajasthan 5	Rajasthan	PHWR	202	expected by mid 2010	Oct 2009 under new agreement
Tarapur 3 & 4	Maharashtra	PHWR	490	2006, 05	
<b>Total (18)</b>			<b>3981 MWe</b>		

Kalpakkam also known as Madras/MAPS Rajasthan/RAPS is also known as Rawatbhata Kakrapar = KAPS, Narora = NAPS dates are for start of commercial operation.

**India's nuclear power reactors under construction:**

Reactor	Type	MWe net, each	Project Control	Commercial operation	Safeguards status
Kaiga 4	PHWR	202 MWe	NPCIL	3/2010	
Rajasthan 6	PHWR	202 MWe	NPCIL new agreement	2/2010	Oct 2009 under
Kudankulam 1	PWR (VVER)	950 MWe	NPCIL	9/2010	item-specific
Kudankulam 2	PWR (VVER)	950 MWe	NPCIL	3/2011	item-specific
Kalpakkam PFBR	FBR	470 MWe	Bhavini	9/2011	-
Total (5)		2774 MWe			
Rajasthan/RAPS also known as Rawatbhata dates are for start of commercial operation.					

**Power reactors planned or firmly proposed**

Reactor	State	Type	MWe net, each	Project Control	Start construct	Start operation
Kakrapar 3	Gujarat	PHWR	640	NPCIL	2010?	2014
Kakrapar 4	Gujarat	PHWR	640	NPCIL	2010?	2014
Rajasthan 7	Rajasthan	PHWR	640	NPCIL	2010?	2014
Rajasthan 8	Rajasthan	PHWR	640	NPCIL	2010?	2014
Kudankulam 3	Tamil Nadu	PWR - AES 92 or AES-2006	1050- 1200	NPCIL	late 2010?	
Kudankulam 4	Tamil Nadu	PWR - AES 92 or AES-2006	1050- 1200	NPCIL	2011?	
Jaitapur 1 & 2	Maharashtra	PWR - EPR	1600	NPCIL	by 2012	2017-18
Kaiga 5 & 6	Karnataka	PWR	1000/1500	NPCIL	by 2012	
Kudankulam 5 & 6	Tamil Nadu	PWR - AES 92 or AES-2006	1050- 1200	NPCIL	2012?	
?		PWR x 2	1000	NTPC	by 2012?	2014
Jaitapur 3 & 4	Maharashtra	PWR - EPR	1600	NPCIL	by 2016	
Kumharia	Haryana	PHWR x 4	640	NPCIL	by 2012?	
Bargi	Madhya Pradesh	PHWR x 2	640	NPCIL		
?		FBR x 2	470	Bhavini		2020

Reactor	State each	Type net,	MWe Control	Project construct	Start operation	Start
?		AHWR	300	NPCIL	by 2012	2020
subtotal		24 units	23,500 MWe			
Jaitapur 5 & 6	Maharashtra	6 x EPR	1600	NPCIL		
Markandi (Pati Sonapur)	Orissa	PWR 6000 MWe				
Mithi Virdi, Saurashtra region	Gujarat	6 x AP1000	1250			
Pulivendula	Andhra Pradesh	PWR?	2x1000	NPCIL 51%, AP Genco 49%		
Kovvada	Andhra Pradesh	6 x ABWR & ESBWR	1350-1550			
Haripur	West Bengal	PWR x 4 VVER-1200	1200			

host four further Russian VVER-1200 units, making 4800 MWe.

At Markandi (Pati Sonapur) in Orissa there are plans for up to 6000 MWe of PWR capacity. Major industrial developments are planned in that area and Orissa was the first Indian state to privatise electricity generation and transmission. State demand is expected to reach 20 billion kWh/yr by 2010.

At Kumharia in Haryana the AEC had approved the state's proposal for a 2800 MWe nuclear power plant and the site is apparently earmarked for four indigenous 700 MWe PHWR units. The northern state of Haryana is one of the country's most industrialized and has a demand of 8900 MWe, but

currently generates less than 2000 MWe and imports 4000 MWe. The village of Kumharia is in Fatehabad district and the plant may be paid for by the state government or the Haryana Power Generation Corp.

Bargi in Madhya Pradesh is also designated for two indigenous 700 MWe PHWR units.

The AEC has also mentioned possible new nuclear power plants in Bihar and Jharkhand.

#### **NTPC Plans**

India's largest power company, National Thermal Power Corporation (NTPC) in 2007 proposed building a 2000 MWe nuclear power plant to be in

operation by 2017. It would be the utility's first nuclear plant and also the first conventional nuclear plant not built by the government-owned NPCIL. This proposal has now become a joint venture with NPCIL holding 51%, and possibly extending to multiple projects utilising imported technology. NTPC says it aims by 2014 to have demonstrated progress in "setting up nuclear power generation capacity", and that the initial "planned nuclear portfolio of 2000 MWe by 2017" may be greater. NTPC, now 89.5% government-owned, is planning to increase its total installed capacity from 30 to 50 GWe by 2012 (72% of it coal) and 75 GWe by 2017. It is also forming joint ventures in heavy engineering.

### Overseas reactor vendors

In February 2009 Areva signed a memorandum of understanding with NPCIL to build two, and later four more, EPR units at Jaitapur. This followed the government signing a nuclear cooperation agreement with France in September 2008. In July 2009 Areva submitted a bid to NPCIL to build the first two EPR units, with a view to commissioning in 2017 and 2018.

In March 2009 GE Hitachi Nuclear Energy signed agreements with NPCIL and Bharat Heavy Electricals (BHEL) to begin planning to build a multi-unit power plant using 1350 MWe Advanced Boiling Water Reactors (ABWR), with discussion continuing regarding the site. In May 2009 L&T was brought into the picture.

In May 2009 Westinghouse signed a memorandum of understanding with NPCIL regarding deployment of its AP1000 reactors, using local components (probably from L&T).

After a break of three decades, Atomic Energy of Canada Ltd (AECL) is keen to resume technical cooperation, especially in relation to servicing India's PHWRs, and there have been preliminary discussions regarding the sale of an ACR-1000.

In August 2009 NPCIL signed agreements with Korea Electric Power Co (KEPCO) to study the prospects for building Korean APR-1400 reactors in India. This will depend on establishing a bilateral nuclear cooperation agreement.

The LWRs to be set up by these foreign companies are reported to have a lifetime guarantee of fuel supply.

### Other arrangements

The state-owned National Aluminium Company (Nalco) has signed an agreement with NPCIL relevant to its hopes of building a 1000 MWe nuclear power plant, apparently as much to diversify as provide for its smelters.

India's national oil company, Indian Oil Corporation Ltd (IOCL), in November 2009 joined with NPCIL in a memorandum of understanding "for partnership in setting up nuclear power plants in India." The initial plant envisaged is at least 1000 MWe, and NPCIL will be the operator and at least 51% owner. IOC will take a 26% stake in it.

The government has announced that it intends to amend the law to allow private companies to be involved in nuclear power generation and possibly other aspects of the fuel cycle, but without direct foreign investment. In anticipation of this, Reliance Power Ltd, GVK Power & Infrastructure Ltd and GMR Energy Ltd are reported to be in discussion with overseas nuclear vendors including Areva, GE-Hitachi, Westinghouse and Atomstroyexport.

NTPC is reported to be establishing a joint venture with NPCIL and BHEL to sell India's largely indigenous 220 MWe heavy water power reactor units abroad, possibly in contra deals involving uranium supply from countries such as Namibia and Mongolia.

In September 2009 the AEC announced a version of its planned Advanced Heavy Water Reactor (AHWR) designed for export.

In August and September 2009 the AEC reaffirmed its commitment to the thorium fuel cycle, particularly thorium-based FBRs, to make the country a technological leader.

### Uranium resources in India

India's uranium resources are modest, with 54,000 tonnes U as reasonably assured resources and 23,500 tonnes as estimated additional resources in situ. Accordingly, from 2009 India is expecting to import an increasing proportion of its uranium fuel needs.

Mining and processing of uranium is carried out by Uranium Corporation of India Ltd, a subsidiary of the Department of Atomic Energy (DAE), at Jaduguda and Bhatin (since 1967), Narwapahar (since 1995) and Turamdih (since 2002) - all in Jharkhand near Calcutta. All are underground, the last two being modern. A common mill is located near Jaduguda, and processes 2090 tonnes per day of ore.

In 2005 and 2006 plans were announced to invest almost US\$ 700 million to open further mines in Jharkand at Banduhurang, Bagjata and Mohuldih; in Meghalaya at Domiasiat-Mawthabah (with a mill) and in Andhra Pradesh at Lambapur-Peddagattu (with mill 50km away at Seripally), both in Nalgonda district.

In Jharkand, Banduhurang is



India's first open cut mine and was commissioned in 2007. Bagjata is underground and was opened in December 2008, though there had been earlier small operations 1986-91. The Mohuldih underground mine is expected to operate from 2010. A new mill at Turamdih in Jharkhand, with 3000 t/day capacity, was commissioned in 2008.

In Andhra Pradesh there are three kinds of uranium mineralisation in the Cuddapah Basin, including unconformity-related deposits in the north of it. The northern Lambapur-Peddagattu project in Nalgonda district 110 km southeast of Hyderabad has environmental clearance for one open cut and three small underground mines (based on some 6000 tU resources at about 0.1%U) but faces local opposition. In August 2007 the government approved a new US\$ 270 million underground mine and mill at

Tummalapalle near Pulivendula in Kadapa district, at the south end of the Basin and 300 km south of Hyderabad, for commissioning in 2010. A further northern deposit near Lambapur-Peddagattu is Koppunuru, in Guntur district.

In Meghalaya, close to the Bangladesh border in the West Khasi Hills, the Domiasiat-Mawthabah mine project (near Nongbah-Jynrin) is in a high rainfall area and has also faced longstanding local opposition partly related to land acquisition issues but also fanned by a campaign of fearmongering. For this reason, and despite clear state government support in principle, UCIL does not yet have approval from the state government for the open cut mine at Kylleng-Pyndeng-Shahiong (also known as Kylleng-Pyndengshohiong-Mawthabah and formerly as Domiasiat) though pre-project development has been

authorised on 422 ha. However, federal environmental approval in December 2007 for a proposed uranium mine and processing plant here and for the Nongstin mine has been reported. There is sometimes violent opposition by NGOs to uranium mine development in the West Khasi Hills, including at Domiasiat and Wakhyn, which have estimated resources of 9500 tU and 4000 tU respectively. Tyrnai is a smaller deposit in the area. The status and geography of all these is not known.

However, India has reserves of 290,000 tonnes of thorium - about one quarter of the world total, and these are intended to fuel its nuclear power program longer-term.

[Excerpted from  
<<http://www.world-nuclear.org/info/inf53.html>>.]



## II. India in Transition

### The Future of Nuclear Power in India

M. V. Ramana\*

**I**N September 2009, while speaking at the inauguration of the International Conference on the Peaceful Uses of Atomic Energy in New Delhi, Prime Minister Manmohan Singh stated that India could have 470 gigawatts (GW) of nuclear capacity by 2050. To put this in perspective, the current nuclear capacity in the country - more than sixty years after the atomic energy program was established

and forty years after the first nuclear reactor started feeding electricity to the grid in the country - is just 4.12 GW; about 3 percent of the total electricity generation capacity. Thus, the projected capacity in 2050 would represent an increase by a factor of over a hundred. Is this feasible, or more generally, is nuclear power likely to become a significant source of electricity for the country?

There are three factors as to why the answers to these questions will be negative: history, technology, and economics. Politics, at different levels, could also affect the future in different ways.

The Department of Atomic Energy (DAE) has a long history of making extravagant projections, none of which have been fulfilled despite extravagant

budgets. The trend started in 1954, when Homi Bhabha, the founder of the nuclear program, announced that there would be 8,000 megawatts (MW) of nuclear power in the country by 1980. By 1960, the prediction was that by 2000, there would be 43,500 MW. Reality, however, was quite different. Actually installed capacity was about 600 MW in 1980 and 2,720 MW in 2000. In 1984, yet another atomic energy profile was announced that visualized 10,000 MW by 2000. As the Comptroller and Auditor General of India noted in its 1999 report, "Against the targeted additional power generation of 940 MW by 1995-96, gradually increasing to 7880 MW by 2001 AD, the actual additional generation of power under the profile as of March 1998 was nil in spite of having incurred an expenditure of 52.91 billion rupees." The trend has continued. In the early 2000s, the DAE projected that nuclear power would constitute 275 GW by 2052; 20 percent of India's total projected electricity generation capacity.

The latter has been increased to 470 GW following the US-India nuclear deal. In light of the appalling history of the DAE's abilities to meet targets, such claims should be considered implausible.

There is at least one good technical reason why these targets are unlikely to be met. The DAE's plans involve constructing hundreds of fast breeder reactors; the much touted three stage nuclear program.

Fast breeder reactors are thus termed because they are based on

energetic (fast) neutrons and because they produce (breed) more fissile material than they consume. In the early decades of nuclear power, many countries pursued breeder programs, but practically all of them have given up on breeder reactors as unsafe and uneconomical. In the words of Admiral Hyman Rickover, the founder of the U.S. naval nuclear submarine program, his experiments with breeder reactors showed that they were "expensive to build, complex to operate, susceptible to prolong shutdown as a result of even minor malfunctions, and difficult and time-consuming to repair." Reliance on a technology shown to be unreliable makes it likely that nuclear power will never become a major source of electricity in India.

In addition, the DAE's projections have simply not accounted properly for the future availability of plutonium. To start with, the DAE will not have enough plutonium for use as fuel by 2020 when it proposes to start on a rapid expansion of breeders, and does not currently have enough reprocessing capacity to handle all the spent fuel produced by the heavy water reactors that are operating and under construction.

Constructing new reprocessing plants typically takes ten to fifteen years.

The DAE has also not taken into account the lag period between the time a certain amount of plutonium is committed to a breeder reactor and when it reappears along with additional plutonium for refuelling the same reactor, thus

contributing to the start-up fuel for a new breeder reactor. Instead, the DAE used a flawed methodology that is only applicable to countries that already have a very large nuclear reactor capacity and a large stockpile of plutonium. These problems with the projected growth rates are not a matter of differences in assumptions but plain impossibilities. In addition, the DAE has resorted to various unrealistic assumptions about dealing with radioactive spent fuel and recovering plutonium.

If one were to use a consistent methodology with more realistic assumptions, the projected nuclear capacity would decrease to about 17 percent of the DAE's projections. Even this estimate assumes that there will be no delays because of infrastructure and manufacturing problems, economic disincentives due to the high cost of electricity, or accidents.

The limited amount of nuclear capacity built by the DAE has been expensive compared to the staple source of electricity in the country: coal. Over the decades, the DAE has made a number of claims about nuclear power's competitiveness with regard to coal powered thermal plants, provided one went farther from coal mines, so as to add a substantial transportation component to the cost of coal. The breakeven distance increased from about six hundred km in the 1950s to 1,200 km in 1999. But when the costs of generating electricity at the Kaiga Atomic Power Station and the Raichur Thermal Power Station (RTPS) VII - both plants of similar size and vintage - were compared with

the coal for RTPS VII priced for a transportation distance of 1,400 km, Kaiga proved competitive only for low discount rates. Due to the multiple demands on capital for infrastructural projects, including the demand for electricity generation, low discount rates are not realistic. Breeder reactors turn out to be much more expensive - 80 percent or more depending on the performance of the reactor - than electricity from the heavy reactors that the DAE has traditionally constructed.

A shift to imported light water reactors from the West brings with it a dilemma, as these tend to be much more expensive to construct than the DAE's heavy water reactors. This would make nuclear electricity uncompetitive. If the DAE were to insist on local manufacture of reactor components as a way of leveraging India's lower labor costs, then many of the construction projects might only proceed slowly, as has been the case in the past.

The final factor, politics, at the grassroots levels, will be yet another constraint to the expansion of nuclear power, as there has been significant opposition to every new nuclear

reactor and uranium that has been planned since the 1980s. One setting where overwhelming opposition has been recorded consistently has been at public consultations to discuss environmental impact assessments of nuclear facilities, a necessary step for any project to be accorded an environmental clearance. Unlike in the West, though, the reasons have less to do with concerns about safety or radioactive waste, though these do cause apprehension among locals. Rather, because of the much greater dependence on natural resources like land and water, the primary concern with nuclear facilities is their impact on lives and livelihoods. In the case of reactors, for example, this is because their requirements for cooling water and land compete with the needs of farmers, and discharges of hot water and radioactive effluents into the sea affect fish workers. Similar factors also drive opposition to large hydroelectric dams, thermal power plants, and automobile factories. This will likely intensify over the decades as land and other natural resources become subject to tremendous competition.

Politics at the elite level, however, has a way of ignoring

such local opposition. Despite the recorded opposition at public consultations, for example, every nuclear project has been granted environmental clearance. In general, the DAE is a powerful organization and nuclear power has a special attraction for the political and economic elite.

This means that even if nuclear power fails to deliver, it will continue to receive patronage. Thus, even though nuclear power will only contribute modest amounts of electricity to India's energy needs for several decades at the very least, it will continue to dominate policy discussions and receive large budgetary allocations. This is unfortunate, as there are a number of sustainable energy solutions that are being ignored for want of political interest and financing.

\* The author is currently an Associate Research Scholar in the Program on Science and Global Security at the Woodrow Wilson School of Public and International Affairs, Princeton University. Has authored a number of books and articles on nuclear issues. An NCC member of the CNDP.

[Source: <http://casi.ssc.upenn.edu/iit/ramana>].



### III. Some Questions Raised by the Contamination Incident

#### at Kaiga Nuclear Power Plant

Surendra Gadekar\*

THE contamination of at least 55 workers at the Kaiga nuclear power plant is a personal tragedy for them and

their families. Everyone of us who have been opposing this dangerous and unforgiving technology, are sympathetic to

their plight and wish them a speedy recovery and no long term health costs due to this incident/accident.

The incident does raise some serious questions regarding safety practices at nuclear installations in the country. The explanations offered by various functionaries in the nuclear establishment have been rather inadequate and sometimes fanciful.

It needs to be noted that nuclear power plants have been under a state of "high alert" ever since the arrest of Mr David Coleman Headley and Mr Tahawwur Rana on suspicions of terrorist activity. Newspaper reports have spoken of nuclear power plants being mentioned in the papers found during interrogation of these two. Supposedly, security has been "beefed up." So it is all the more surprising that anyone can "cause mischief" by adulterating drinking water at a cooler with tritium.

The official explanation of a "disgruntled" employee causing "mischief" raises more questions than it answers.

Firstly, if some "insiders" are so callous as to indulge in an attempt to cause serious bodily harm to random fellow workers, does it not say something on the process of recruitment itself and also on the level of employee job satisfaction within the nuclear power corporation? What is to prevent more "disgruntled" elements from sabotaging vital reactor safety systems and putting the public and surrounding countryside at grave risk? If the heightened security system is so lax as to allow such shenanigans, how can the public have trust in their abilities to provide vital fool-

proof security. An "accident" whether caused by a natural calamity, or by operator error, or by instrument or design failure or through a deliberate act of sabotage can cause serious damage whose effects would last a long, long time to come.

Secondly, heavy water is expensive. It costs well over Rs 20000 to produce a liter. The fact that such precious materials are easily available to any mischievous insider, does throw a light on the culture of casual disregard for waste and corruption in the organisation. Heavy water gets tritiated only after use in the reactor either as moderator or coolant. The fact that this heavy water was not inside the reactor indicates that it had been stored on the premises after use perhaps for purification/up-gradation prior to reuse. There is no need to use reactor premises as storage space for used heavy water.

Newspaper reports of Dr Kakodkar's explanation have not been very clear as to how tritium contaminated a drinking water cooler. There has been a mention of "tritium vials" having been added to the cooler. If this be true, it would be even more worrying since although heavy water is expensive, its cost is peanuts compared to the cost of producing tritium. Estimates of these costs vary from \$30,000 per gram in Canada to \$100,000 per gram in the United States. If purified tritium vials which are a vital component of thermonuclear weapon systems, are available to any disgruntled element we have indeed a much larger problem on our hands.

The authorities both nuclear and civil have acted true to form. They probably have a written format for such emergencies. The first step is to attempt to suppress all information if possible. So although the 'incident' took place on the 25th of November [2009], it was only on the 28th that newspapers and television media got hold of the story. My guess is that since a lot of people needed hospitalization, it became impossible to continue efforts at entirely suppressing the story. The second step is to immediately 'allay' public fears. How much tritium activity was found in the urine samples taken from the affected workers. Not one concrete number, just that it was 'mild', people have been treated and were now back at work. However, an extensive Google search, revealed that 53 out of the 55 people admitted had been discharged so presumably two were probably more heavily contaminated. Third step: confusion through inadequate and sometimes misleading information. So how many people were hospitalized? Numbers in various newspapers vary from "about 30" to "about 55". There is of course the confusion about how the mischief maker was able to get access to either tritiated heavy water or the tritium vials.

The ill effects of radioactivity of Tritium have always been underestimated by the radiation community. That is because it has a 'short' biological half life inside the body. Half of it is out within ten to twelve days of ingestion. However, Tritium is a dangerous toxin because it is chemically identical to hydrogen

and hence is part of water and can go anywhere in the body. Let us not forget that the human body is over 70 percent just water. Secondly, tritium can sometimes get bound to organic molecules and spend much longer time in the body. Thirdly it can cross the placental border and severely affect growth and development of babies in the womb. This is why it is the most likely suspect in the spate of congenital deformities observed around CANDU type nuclear power plants and other military nuclear facilities that use tritium to produce thermonuclear bombs.

Another pet sentence from the nuclear establishment is that all such accidents are studied and their "lessons learnt." Unfortunately, this incident gives a lie to such facile sloganeering. In 1991 on July 27th, something very similar took place at the Heavy water

plant run by the Department of Atomic Energy at Rawatbhata in Rajasthan. There drums of tritiated heavy water were stored in a room that needed a whitewash. Outside labourers were hired to do the whitewash and found that the taps were (as usual) not working. They mixed the lime with the water in the drums, did the whitewash, then cleaned their brushes and faces with the same water and went away. All this without any supervision from plant authorities. It was only later when the radiation counters started screaming that these worthies surmised that their rooms had the costliest whitewash in history and instituted a search for the 'errant' labourers who of course hearing of the hullabaloo decided to remain incognito and suffer the injuries to their health in silence. Since they were only "casual" outside labourers and since the incident did not cause any ripple

in the English language media, the nuclear establishment was able to laugh the matter off.

With the proposed nuclear expansion very much in the cards, such incidents are bound to become a regular feature in the future.

\* The author is a renowned Gandhian anti-nuclear activist. He did his Ph.D from IIT-Kanpur and then was a Post-Doctoral Fellow at the Iowa State University, USA from 1979 to 1981. Subsequently, he joined the faculty of Indian Institute of Science, Bangalore. He left his job in 1986 to work with the famed Gandhian Institute, Sampoorna Kranti Vidyalaya, in Vedchhi, Surat. He is an NCC member of the CNDP.

[Source:  
<<http://www.sacw.net/article1260.html>>.]




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## IV. Time to Honour the Deal?

### People on Guard against Dispossession and Worse

Mihir Bhonsale\*

**N**OT long ago did Manmohan Singh the Prime Minister of India sign the infamous Indo-U.S. Nuclear Deal, amidst a furore from the Indian Left, in particular, over India's strategic alliance with the US, and anti-nuclear activists severely critiquing a much broader range of implications. The treaty was yet entered into dismissing the dissenting voices to the Deal, repeatedly raised even in the portals of the Indian Parliament.

Madban and Haripur along with Koodamcolum, today, have become metaphors of the injustice which the Indian rulers have inflicted on the Indian masses.

Madban, a village on the Western Coast and in Ratnagiri District of Maharashtra on 22nd January 2010 became a site of protest and action against the Jaitapur Nuclear Power Project (JNPP) of around 10,000 MW

capacity under the Nuclear Power Corporation of India Limited (NPCIL). The plant is to be supplied and built by Areva of France. Residents of Madban are pretty much determined on resisting the project. Pravin Gavankar of the Jaitapur-Madban Anu Urja Virodhi Samiti and a project-affected himself said: "We are betrayed by the state administration". 'Our protests against the forcible land acquisition drive of the state

administration for the project remain un-heeded to. "The state administration has deceived us every time we have registered our resolve to not give up our land for the project." According to declared official position, around 938 hectares of land is required for the JNPP. The distribution of compensation cheques in lieu of the land to be acquired was to be done on three days, viz. 29th of December 2009, 12th January 2010 and 22nd January 2010. Till now not a single resident of Madban has accepted compensation for land from the state administration. According to Pravin Gavankar, on 22nd January, the police brutally lathi-charged the protesting villagers of Madban who were waving black flags to the visiting state officials, saying "No" to the Nuclear Power Project. About 1500 villagers had assembled to register their protest against the project.

Rambhau Patil, Acting General Secretary of the National Fishworkers Forum (NFF), noted that the state administration is pushing ahead with the project ignoring the Panchayat's strict refusal to implementation of the project in Madban. He also noted that the fisherfolk of the coastal Maharashtra are with the Madban Anu Urja Virodhi Samiti in detesting the undemocratic crushing of the people's movement against the nuclear power plant.

The Konkan region where the Madban is located, in the last decade or so has seen a number of development projects which has made the vast majority of local people suffer. This has led to the formation of the Kokan Vinashkari Prakaalpa Virodhi Samiti, which is a network of individuals and organisations resisting, the implementation of

projects adversely affecting the local people's interests. Also, Mumbai, Pune and Kolhapur have become centres of civil society demonstrations condemning the state for trying to implement the Jaitapur Nuclear Power Project.

The Kokan Vinashkari Prakaalpa Virodhi Samiti has already undertaken a march in solidarity with the protesting Madban villagers. The Republican Party of India will hold a dharna on the 2nd of February 2010 to protest against the Jaitapur Nuclear Power Project. And the resistance continues.

\* The author is a young student activist undertaking his post-graduate studies in the Jadavpur University, Kolkata..




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## V. Protest Petition to the President of India against New Uranium Mining and Nuclear Power Plants

To  
Smt. Pratibha Patil,  
The President of India,  
Rashtrapati Bhavan,  
New Delhi - 110 001.

Copy to:  
Sri Manmohan Singh,  
The Prime Minister of India,  
New Delhi - 110 001.

Sri Jairam Ramesh,  
The Minister of Environment &  
Forests,  
New Delhi - 110 001.

Subject: Protest against New

Uranium Mining and Nuclear  
Power Plants

Madam,

We are writing to you on behalf of the National Alliance of Anti-nuclear Movements.

It is to protest against the reported decision of the government of India to take a quantum leap in installed capacity for nuclear power generation, from the current level of 4,120 MW to 63,000 MW by 2032. This decision is but an invitation to disaster.

In this context, we will like to submit the following:

Nuclear power, contrary to orchestrated hypes, is actually costlier than power from conventional sources like coal, gas and hydro. And once all the hidden costs are factored in, it would be costlier than even from renewable sources, like wind, in particular.

More importantly, it is also intrinsically hazardous, as large amount of radiation is routinely released at every stage of the nuclear fuel cycle. An even more

intractable problem is that of safe storage of nuclear waste and safe disposal of outlived power plants, given the fact that the half-lives of some of the radioactive substances involved are over even millions of years.

Even more disconcerting is, considering the complexity of the technology of a nuclear reactor; there is no way to ensure that a major accident at a nuclear power plant will never take place. And a major accident, given the nature of things, will just turn catastrophic affecting a very large number of people, over a large territory, over a very long period. The disastrous accident at the Chernobyl nuclear power plant, in the Ukraine province of the then USSR, on April 26 1986 is a chilling illustration.

The promise of nil greenhouse gas (GHG) emission is also nothing more than a myth if the entire fuel cycle - including mining, milling, transportation and construction of the power plant - is considered.

Moreover, nuclear energy with its highly centralized power production model would only further aggravate the problem by accentuating the current development paradigm reliant on mega-industries and actively blocking any possibility towards ecologically benign decentralized development.

The strong linkage between nuclear power and weapons - in terms of large overlaps in technology, in turn triggering strong political push - of which India itself is a graphic illustration can also be overlooked only at our own peril given the genocidal, and

suicidal, character of the nuclear weapon.

As nuclear power is economically unattractive and socially unacceptable, on account of radiation hazards and risks of catastrophic accidents, no order for new nuclear reactors was placed in the USA and most of West Europe during the last 30 years, since the Three Mile Island accident in the US in 1979.

The US and European companies in nuclear power plant equipment and nuclear fuel business are thus looking to Asia for markets - India, China and Japan spearheading the current expansion programme.

It is unfortunate that the Indian government is becoming their willing collaborator in this in pursuit of its megalomaniac hunt for nuclear power and weapon. It has thus, over a period of just one year, rushed to enter into agreements with as many as seven countries, viz. the US, France, Russia, Kazakhstan, Namibia, Mongolia and Argentina.

So far, nuclear power production capacity in India is very small, only about 3 percent of the total electricity generation capacity; and the veil of secrecy surrounding the existing nuclear power plants in the country, and absence of any truly independent monitoring agency, has seriously hindered dissemination of information on accidents - large and small - at these plants and their public scrutiny. That explains the current low level of popular awareness as regards the grave threats posed by the nuclear industry.

Taking advantage of this, the government of India is now set to steamroll its massive expansion program.

The contention that nuclear power is indispensable to meet future energy needs is false; for energy demand, and "need", is obviously a function of the development paradigm chosen and pursued. And "energy security" is not an autonomous entity or objective, but must be in alignment with other chosen objectives which must include equitable growth and concerns for ecology.

Viewed thus, "energy security" may be achieved by: (I) Increasing efficiency of electricity generation, transmission and distribution. (II) Doing away with extravagant and wasteful use of energy. (III) Pursuing a path of low-energy intensity and decentralised development. (IV) Making optimum use of alternative energy options. (IV) Radically raising investment in development of sustainable and renewable energy sources and technologies, especially wind and solar energy.

As a part of its expansion program, the government of India has announced plans to expand the nuclear power plant coming up at Koodankulam (Tamil Nadu). Additional four reactors from Russia of 1,200 MWe each, in the immediate or near future, are to come up over and above the two of 950 MWe each, presently under construction. The process for setting up a nuclear plant at Jaitapur (Ratnagiri district, Maharashtra) has also reached an advanced stage. The French

company Areva is set to supply two new generation reactors of 1650 MWe each, to be followed by another two. Land acquisition notices have been served on the local people to acquire 981 hectare of land.

The government has reportedly already approved 15 new plants at eight sites.

These sites are Kumharia in Haryana - meant for indigenous reactors; Kakrapar (indigenous reactors) and Chhayamithi Virdi (reactor from US) in Gujarat; Kovvada (reactor from US) in Andhra Pradesh; Haripur (reactor from Russia) in West Bengal; Koodankulam (reactor from Russia) in Tamil Nadu; and Jaitapur (reactor from France) in Maharashtra.

Similarly, the mad rush for

more and more power plants is matched by an accelerated drive for uranium mining in newer areas: Andhra and Meghalaya, in particular. And this, despite the horrible experience of uranium mines in different parts of the world, as also in our own Jadugoda - where appalling conditions continue despite strong popular protests, spanning decades.

In view of all these facts enumerated above, we the undersigned demand that the government of India put a complete stop to the construction of all new uranium mines and nuclear power plants, and radically jack up investments in renewable and environmentally sustainable sources of energy.

We also earnestly urge you to intervene immediately.

Note: The Protest Petition to the President of India against New Uranium Mining and Nuclear Power Plants, as reproduced above, was faxed to the addressees viz. the President of India, Prime Minister of India and also the Minister of Environment & Forests on Jan. 30th - the Martyrs' Day.

On Feb. 1, the hard copies along with list of signatories were handed over.

The petition is hosted online at <<http://www.petitiononline.com/Nonukes/petition.html>>. It has been signed by more than half a thousand concerned citizens. The list of signatories is not attached here.

Available at <[http://www.petitiononline.com/mod\\_perl/signed.cgi?Nonukes](http://www.petitiononline.com/mod_perl/signed.cgi?Nonukes)>.



### **Membership Form**

Annual Membership Fee:  
Students Rs. 20, Individuals Rs. 100,  
Organisations Rs. 500

Name:

Organisation:

Address:

Phone:  
e-mail:

Please mail your Draft/Cheque, drawn in favour of "peace-cndp", payable at New Delhi, to CNDP A-124/6, Katwaria Sarai, New Delhi 110 016

### **CNDP**

The Coalition for Nuclear Disarmament and Peace (CNDP) is India's national network of over 200 organisations, including grassroots groups, mass movements and advocacy organisations, as well as individuals. Formed in November 2000, CNDP demands that India and Pakistan roll back their nuclear weapons programmes. Our emphasis:

- No to further nuclear testing
- No to induction and deployment of nuclear weapons
- Yes to global and regional nuclear disarmament

CNDP works to raise mass awareness through schools and colleges programmes, publications, audio and visual materials, and campaigning and lobbying at various levels.

CNDP membership is open to both individuals and organisations. So if you believe nuclear weapons are evil and peace is important, fill in the Membership Form!

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**Editors: Ilina Sen, Anil Chaudhary, Sukla Sen**