Peace Now!

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EDITORIAL

ON September 24, just before going to the press, the UN Security Council in its sixty-fourth year and 6191st meeting having been chaired by the US President Barack Obama had its agenda, "Maintenance of international peace and security: Nuclear non-proliferation and nuclear disarmament", approved; and then proceeded to unanimously adopt the Resolution 1887 (2009), as had been drafted by the Chair, without any amendment or modifications.

The easy passage of the Resolution goes to indicate a lot of behind-the-screen confabulations, to mould and accommodate various viewpoints, prior to the actual meet.

Be that as it may, while the precise import of the Resolution is being scanned and deciphered by the experts, this has been universally recognised as a very significant development in line with the earlier pronouncement by Obama on April 5 in Prague, which had been acknowledged a positive development by the CNDP even if with a few riders, and his subsequent decision to scrap the ballistic missile defence project in Europe. (This has also been cautiously welcomed by the CNDP.)

On expected lines, the government of India has responded belligerently.

In a missive shot by the Permanent Representative of India at UN, H S Puri, in anticipation of the Resolution, it has been defiantly asserted: "Nuclear weapons are an integral part of India's national security and will remain so". And no less than the

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authority of Indian Prime Minister's pronouncement in Indian parliament on July 29 2009 has been cited in support. Of course, true to Indian traditions, the high principle of "non-discriminatory and global nuclear disarmament" has been duly referred to and the over-emphasis on "non-proliferation" has been righteously slammed. But that just cannot obliterate the fact of profound immorality of considering nuclear weapons "an integral part of India's national security" in complete reversal of India's proclaimed stand till 1996.

At the height of the CTBT debate, as late as in March 1996, India's the then Foreign Secretary Salman Haider had made a special appearance before the Conference on Disarmament to say: "We do not believe that the acquisition of nuclear weapons is essential for national security, and we have followed a conscious decision in this regard. We are also convinced that the existence of nuclear weapons diminishes international security. We, therefore, seek their complete elimination. These are fundamental precepts that have been an integral basis of India's foreign and national security policy." What a horrendous reversal!

"All the waters in the ocean cannot wash away the blood"! So to say.

Whatever the merits and shortcomings of the UNSC Resolution 1887, which has been generally welcomed - ranging from ecstatic to somewhat muted - by the global peace movements; India, in the recent years, has for sure emerged as a major impediment to the process of global nuclear disarmament, albeit still taking cover under all sorts of high principles. And there is a sort of "consensus" across the mainstream political spectrum.

That makes the task of Indian peace movement all the more difficult and their role all the more crucial.

There has recently been no spectacular movement forward as regards the Indo-US Nuclear Deal. In fact, the final confirmation to the IAEA from India appears to be still pending. The 1962 Atomic Energy Act which is reportedly in for some major overhaul to facilitate private participation in the nuclear sector as operators, and also to help the American suppliers of nuclear reactors to have a piece of the pie, remains in tact. At least as yet.

Armed with the 45-meber NSG waiver, six bilateral MOUs/agreements have, however, been sewn up till date - with Kazakhstan, Namibia and now Mongolia for uranium; and also Russia, France and the US, primarily for reactors.

So a massive expansion of the nuclear power programme, with all the nightmarish consequences, is very much on the cards.

So that needs as robust a response.

The current issue deals with all these in some details and depth.

A. India and Nuclear Disarmament

I. CNDP Statement on Obama Administration Scrapping European Missile Defence Plan

THE Coalition for Nuclear Disarmament and Peace (CNDP), India notes with some satisfaction and cautiously welcomes the decision by the incumbent US Administration under President Barack Obama to scrap the US missile defence deployments under way in the Czech Republic and Poland.

The CNDP also on this occasion recalls that the government of India under the BJP-led NDA was amongst the very first to endorse the utterly deplorable decision of the Bush Administration in May 2001 to go ahead with its Ballistic Missile Defence (BMD) system. Further spurred by such supports, the Administration would soon thereafter, in following December, unilaterally scrap the 1972 Anti-Ballistic Missile (ABM) Treaty with Russia in clear violation of accepted international norms.

The Obama move now goes only to partly knock off that project.

The CNDP further notes that while the decision made public on September 17 2009 has taken large sections of the US establishment by surprise and evoked sharp negative reactions from some quarters including the Republican camp, both the Russian President and Prime Minister have warmly welcomed it. Consequently, the move puts an end to one of the most controversial legacies of the Bush regime. It would hopefully help building better understanding and cooperation between the US and Russia geared towards a nuclear weapon free world, the first promise of which was held out in the joint statement issued earlier this year on April 1st, as a consequence.

The CNDP fervently hopes, and urges, peace movements all over the globe, taking advantage of this favourable turn, would raise their pitch for global nuclear disarmament and an early convening of a Nuclear Weapons (Abolition) Convention towards that goal.

The CNDP also calls upon the government of India to join force with such a move in tune with the spirit of the celebrated Rajiv Gandhi Action Plan presented to the United Nations General Assembly on June 9 1988.

The GOI must reverse its regrettable obstructionist role as regards global nuclear disarmament adopted since.

Achin Vanaik
N. D. Jayaprakash
Sukla Sen

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*II. Towards Nuclear Disarmament**

Garimella Subramaniam#

INDIA'S Coalition for Nuclear Disarmament and Peace (CNDP), which I am privileged to represent here, has welcomed Washington's recent pronouncements on global nuclear disarmament with caution and qualifications. When President Barak Obama acknowledged in his April address in Prague that "as the only nuclear power to have used a nuclear weapon, the United States has a moral responsibility to act," a world still reeling under the Bush era legacy which authorized, in utter contempt for international law, the possibility of pre-emptive nuclear strikes even against Non-Nuclear Weapons States (NNWS) was naturally taken by surprise by the sober and conciliatory tone from the new U.S. president. But amid this near euphoria, we should not lose sight of the fact that Obama's pledge to rid the world of nuclear weapons is a legal commitment that Nuclear Weapons States (NWS) made over four decades ago under the Nuclear non-Proliferation Treaty (NPT). But the NWSs between them have today 27,000 warheads, the U.S. and Russia combined hold 95 percent of the world's nuclear arsenal and the spread of technology to enrich uranium and reprocess plutonium to produce the deadly weapon steadily undermines the nonproliferation regime. Worse, the U.S. and its allies Britain and France have dishonoured their guarantees under the NPT not to use nuclear weapons against NNWSs - the so-called negative security assurances.

First, there is an important irony behind Obama's proposals in Prague for the U.S. and Russia to further reduce their strategic nuclear arms. He made this announcement in the Czech Republic, the very country with whom, besides Poland, the U.S. earlier this year concluded an agreement to allow Washington to install the missile interceptor system, ostensibly against an Iranian threat, despite staunch opposition from Russia and many European countries. The irony is all the more telling in view of the fact that Tehran's own nuclear ambitions are closely linked to Israel's not so secret acquisition of nuclear weapons, about which Obama has remained conspicuously silent.

Our memory of such hypocrisy on the part of the U.S. is fresh from the most recent unilateral aggression unleashed against Iraq. The increasing resort to (or threat to use) military force as a tool of geopolitics has heightened perceptions of potential nuclear threat in countries with a capability to develop the weapon or its possession seen as conferring prestige.

Second, there is growing scepticism even with respect to ongoing negotiations between the U.S. and Russia for a successor to the Strategic Arms Reduction Treaty I to further cut the number of operationally deployed nuclear warheads and delivery vehicles. The Russians are concerned that they may end up making unilateral concessions on reducing their arsenals and hawks at home are suspicious that Washington, more than Moscow, would be the loser under future cuts, only because a large number of Russian warheads would any way become redundant by around 2015. Alarm bells are already ringing both within and outside the U.S. Congress on Obama's disarmament plans and influential Republican voices are sure to uppe the ante when the new Nuclear Policy Review is given finishing touches later this year.

The return of nuclear disarmament onto the global agenda, I may hazard to say, has had a somewhat sobering influence on the two nuclear neighbours in the sub-Continent. The ongoing peace process of the past five years has of course been put on hold following the Mumbai serial blasts of 26-11-2008. But the shrill calls by hawks in India for tough retaliation against Pakistan's suspected hand behind the attacks met with equally strong popular repudiation of such demands in the subsequent regional and national elections.

But recent signs of an apparent thaw in relations between Islamabad and New Delhi should be no cause for complacency in the peace movement in another area fraught with ominous consequences beyond India. In their enthusiasm to reap the strategic and commercial harvest from the 2008 civilian nuclear cooperation agreement with the U.S., India's political and scientific establishment is attempting to impose a burdensome, secret and non-transparent agreement on the people, characteristic of the country's nuclear policy. The deal brokered during the recent visit of the U.S. Secretary of State seeks to indemnify nuclear fuel suppliers from the U.S. from all consequential damages caused in future nuclear accidents. This means that the liability for compensation for victims of a Chernobyl or Three-Mile Island like disasters would rest exclusively with domestic operators of such plants, not to mention the huge irreparable cost of environmental contamination. Anybody who is familiar with the visible lack of a culture of public safety in day-to-life in India and rampant bureaucratic red-tape will shudder to imagine the consequences of a nuclear catastrophe for ordinary people. The proposed law to cap disaster liability, in yet another cruel irony, coincides with the 25th anniversary of the poisonous gas leakage in the U.S. multinational Union Carbide's plant in central India that instantly consumed thousands of lives and left many more afflicted with terminal diseases.

Now that India's entry into the elite club of nuclear haves is a fait accompli, the peace movement has the responsibility to pressurize our governments to draw upon the best practices from western countries and also Japan to ensure maximum protection against all forms of nuclear risk.

In this context, I may be permitted to report the pioneering initiative of the Scientists Against Nuclear Weapons in Chennai. The slideshow entitled "Hiroshima can happen in Chennai too," is presented in schools and street corners on 6th and 9th August, as well as on 2nd October, commemorating the birth anniversary of Mahatma Gandhi the man who led India to independence through a non-violent struggle. People who watch the presentation are, more often than not, persuaded that claims about the deterrent value of nuclear weapons must be a fallacy because these are weapons of mass destruction.

The CNDP has consistently emphasized the demand for regional denuclearization as a critical contributor to global disarmament and has adopted a

resolution in its 2008 National Convention to strive, in collaboration with the Pakistani peace campaign, for the establishment of a South Asian nuclear weapons free zone. In that spirit, the CNDP expresses solidarity with the Japanese coalition for disarmament in its efforts to disallow the production, maintenance and use of nuclear weapons in your country.

**** Text of the speech delivered at the International Meeting 2009 World Conference against Atomic and Hydrogen Bombs at Hiroshima (August 5 2009)***

 # A senior journalist in Chennai with the Hindu, National Coordination Committee member of the CNDP.

III. The Case Against Further N-tests by India

Praful Bidwai#

WHY do we keep showering awards and honours upon the managers of our security and space-science establishment despite the shoddy results it produces after claiming stellar successes? "Missile Man" APJ Abdul Kalam got the Bharat Ratna, India's highest civilian honour, six years before economist-philosopher Amartya Sen did, for a an infinitely richer contribution.

Doesn't the recent winding up of the Integrated Guided Missile Programme launched by Dr. Kalam in 1983 signify its terminal crisis? Why doesn't India have a reliable intermediate-range missile barring Agni-I? Why has the cost of the nuclear submarine risen 30-fold?

If the Defence Research and Development Organisation is the grand success it's claimed to be, then why has it never completed a major project without huge delays and cost overruns? Why did the Department of Atomic Energy have to get critical Russian designs and equipment for the N-submarine reactor after working on it for 34 years?

The DAE and DRDO have long been unmatched for their boastful claims, missed targets, unaccountability and excessive secrecy. Now, the Indian Space Research Organisation, earlier considered transparent and honest, has joined their league.

ISRO's Moon mission has just been terminated because the orbiter got overheated, leading to the collapse of vital subsystems, including sensors that determine its orientation.

It's not the mission's premature termination, or ISRO's miscalculation of the craft's surface temperature, that warrants concern. Mistakes aren't uncommon in space programmes. ISRO did raise the craft's orbit to prevent overheatingto no avail.

ISRO's real failure lay in misleading the public and its own scientists. It falsely claimed that the orbit was raised to enable a better view and "further studies" of the Moon.

ISRO didn't tell its scientists of the overheating crisis, noticed one month after launch, for over three months. It kept its overseas collaborating scientists in the dark for a month after the sensor failure.

ISRO's bosses also gagged its researchers. Yet, three senior ISRO officials asserted in May that there was "nothing wrong" with any of the spacecraft's systems. It's this unethical non-disclosure of the whole truth that's ISRO's greatest sin against science.

Truth is an even greater casualty in the nuclear weapons arena the holiest of the Holy Cows of national security. Anything nuclear bureaucrats do, such as India's May 1998 nuclear explosions, is described as a major scientific or technological feat.

Their greatest claimed achievement then was detonating a hydrogen (fusion/thermonuclear) bomb on May 11, when two other devices were also exploded: a

fission bomb similar to that detonated over Nagasaki, which killed 70,000 people, with an explosive yield of 12 kilotons (12,000 tonnes of TNT), and a sub-kiloton device.

However, claims Dr. K Santhanam, a DRDO official in the Pokharan-II core team, the H-bomb fizzled out. Its fusion assembly, its heart, didn't ignite or did so on a minuscule scale.

Both DAE and DRDO strenuously and peevishly deny this. They have challenged Dr. Santhanam to produce hard evidence, knowing well that under the rules of secrecy, he's unlikely to possess it. National Security Adviser MK Narayanan called Dr. Santhanam "a maverick." He may well be one, but that cannot demolish his claim.

What's the truth about the H-bomb? Does it warrant rethinking on India's nuclear testing moratorium, announced in 1998 and reiterated in 2005?

Dr. Santhanam isn't saying anything original. A US seismologist, using publicly available data, concluded that the combined yield of the three May 11 explosions was 10 to 25 kt, not the claimed 55 kt.

US Natural Resources Defence Council experts said the mid-point of the probable yields was about 12 kt. Lawrence Livermore National Laboratory analysts concluded that the second stage of the two-stage fusion assembly failed to ignite as planned. Some retired Indian scientists had similar assessments.

The DAE called these "baseless" and said the tests were "perfect" India had conducted their "full complement" and "obtained three robust bomb designs."

It claimed it had kept the yield "deliberately low" it normally should be 1,000 kt-plusto avert seismic damage to villages near the test site. It also contended, incredibly, that Indian and Western seismic readings differed because the simultaneous explosions caused "wave interference." But such interference would have reflected in India's sensors too.

I discussed this in my book (co-authored with Achin Vanaik) South Asia On A Short Fuse: Nuclear Politics and the Future of Global Disarmament (Oxford, 1999). On balance of probability, it seems that the H-bomb didn't perform as planned. Even if it did, a single test can't give weapons engineers enough confidence in its design.

States conduct multiple tests on a design under different conditions before it's considered usable. But the DAE took shortcuts. DRDO has similarly declared missiles battle-ready after just one or two test-flightswhen technologically advanced countries conduct 10 or more test-flights.

Further debate is necessary on the "fizzle." But we shouldn't fall into the trap of demanding further nuclear tests. An H-bomb isn't part of India's doctrine of "minimum credible nuclear deterrent." Nuclear weapons are irrelevant to defence, and generate insecurity, instability and a potentially ruinous arms race. The world needs and deserves nuclear disarmament.

Even leaving aside the disarmament imperative, which India professes, there's no case for an H-bomb. India has over 100 fission weapons, each enough to kill up to o million people. This is deterrence enough.

There's a lesson here from the US. In 1949, a committee of top-level scientists - including Enrico Fermi and Robert Oppenheimerurged President Truman: "[A hydrogen bomb] would bring about the destruction of innumerable human lives; it is not a weapon which can be used exclusively for the destruction of … military installations … Its use therefore carries much further than the atomic bomb itself the policy of exterminating civilian populations."

The advice was ignored. But its wisdom remains valid today. An H-bomb arsenal won't give India security. It will only raise our mass-destruction capacity and escalate the South Asian arms race. We must say no to further testing.

 # A senior journalist and author, National Coordination Committee member of the CNDP.

IV. A New Nuclear Debate in India

J. Sri Raman#

AS an anti-nuclear-weapon activist of India, I am abashed to admit this. But the main nuclear debate in the major South Asian country has not been the one between nuclear militarists and their opponents. It has been the one between two schools of nuclear militarism. The debate has acquired a new dimension, with the hawks of all these years suddenly made to appear doves.

The US has figured in the debate all through. If George W. Bush initiated the earlier polemics by presenting a nuclear deal to India, the current controversy has a Barack Obama connection.

India's nuclear-weapon tests of May 1998 in the desert site of Pokharan did provoke some serious protests from sections that saw what these presaged for South Asia. These, however, led to no national debate. The voice of the anti-nuke agitators was drowned in the high-decibel celebrations of Pokharan II (as the test series was named, Pokharan I was given as the title of the "peaceful nuclear explosion" conducted at the same site in 1974).

The nation witnessed its first major nuclear debate after former President Bush and India's Prime Minister Manmohan Singh met in Washington in July 2005 and announced their decision to go for a "US-India nuclear deal." Right from then, a loud and lacerating political controversy raged in India over the deal, until July 2008 when the Singh government won a parliamentary confidence vote on the issue.

Yes, we in the anti-nuke camp declared war on the deal, too. We did so because the deal gave India the dubiously high status of a nuclear-weapon state, with which Washington and its allies were willing to do nuclear business. The "civilian nuclear cooperation agreement," signed in March 2006, clearly helped and did not hamper India's strategic nuclear program. Under the deal, New Delhi could keep specified strategic nuclear reactors out of the purview of the inspectors of he International Atomic Energy Agency (IAEA). And the nuclear commerce, for which the deal opened the doors, freed up India's indigenous nuclear fuel resources for use in its weapon program.

Our case was a cry in the wilderness, only faintly heard in the mainstream media with headlines reserved for the war of militarists. The main discourse was dominated by opposition to the deal from a point of view diametrically opposite to ours. The far-right Bharatiya Janata Party (BJP), which was in power 11 years ago and presided over Pokharan II, decried the deal as an attempt to derail the weapon program.

A tokenistic Washington position about future Indian testing (which was to be allowed anyway if a changed strategic situation was deemed to demand it) was presented as proof that the deal sought to "cap" New Delhi's strategic nuclear schemes. Even sections of the left joined this lopsided opposition to the deal by seeing it as an attack on India's "sovereignty" in relation to its strategic nuclear program.

It is over the issue of testing again that the current, second major Indian nuclear debate has erupted. The sides, however, are not he same.

On the deal, pitted against each other were the BJP and its fiends on the one hand and Singh's Congress Party and its allies on the other. The BJP and the Congress are now on the same aide of the barricades.

Some prominent individuals, too, have switched sides, most notably former President A. P. J. Abdul Kalam. The BJP first hailed Kalam, scientist operationally in charge of Pokharan II, as the father of the Indian bomb and helped him into the presidential palace in New Delhi. It, however, condemned him as a compromiser of India's sovereignty when he upheld the deal as the answer to the country's need for uranium. But the party and Kalam are making common cause in the current controversy.

No mystery shrouds their

motive. Both of them share a stake in preserving Pokharan II as a symbol of Indian pride. And the controversy has put that avowed achievement in question.

It all began when K. Santhanam, a scientist who worked under Kalam in 1998, was reported on August 27 as trashing the test series. He was quoted as alleging, in effect, that the leaders of the then BJP-headed government and the nuclear establishment had lied to the nation about the tests. According to him, as many foreign experts had said at the time, the thermonuclear or hydrogen bomb tests had ended in a "fizzle."

A "fizzle" occurs when the testing of a nuclear bomb fails to meet its expected yield or falls short by 30 percent or more. The yield is the amount of energy discharged when a nuclear weapon is detonated, with the amount being expressed in kilotons (thousands of tons) or megatons (millions of tons) of trinitrotoluene (TNT).

A hydrogen bomb can produce far greater destructive power than an atom bomb. The biggest bomb tested by the Soviet Union is said to have produced 50 megatons of explosive power - nearly 3,000 times more destructive power than the bomb dropped on Hiroshima, which killed 80,000 people instantly, according to the most conservative estimate. This is the weapon India has, the BJP and its band claim. It is what India has yet to acquire, Santhanam and others wail.

Santhanam put the yield at 15 to 20 kilotons, or less than half the officially claimed 45 kilotons. The pride-puncturing estimate has the predicted reactions from everyone with a reputation resting on Pokharan II. It has also been rejected by the reigning nuclear establishment.

Past heads of the establishment, however, have condemned official claims on Pokjaran II almost in a chorus. One of them, former chairman of India's Atomic Energy Commission (AEC) P. K. Iyengar, has also added a political dimension to the debate that is bound to embarrass the Pakistan-obsessed BJP.

According to Iyengar, the tests were done in haste at the bidding of former Prime Minister Atal Bihari Vajpayee's government of the day in order to beat Pakistan to it. He says that, in March 1998, two months before Pokharan II, India's intelligence probably found out that the Pakistanis were about to test. "If Pakistan fired an explosion before India," asks Iyengar ironically, "what would a common man in India have thought?"

A more intriguing question is: why are Santhanam and others raising the issue over a decade after the event? Writes Ramesh Thakur, director of the Balsillie School of International Affairs. Waterloo, Canada: "The reason for Santhanam's revelation may be to put pressure on the government to conduct further tests for validating the design of India's hydrogen bomb, before the window is closed if the Obama administration ratifies the Comprehensive Test Ban Treaty and pressures remaining hold-outs to follow."

The demand by Santhanam and others for more tests, despite India's voluntary moratorium on testing, reinforces Thakur's reasoning.

Added to this, perhaps, is an anti-China angle. The controversy has broken out around the same time as India is witnessing a media-powered campaign to create new tensions between New Delhi and Beijing. Santhanam has strengthened this suspicion by calling for "a series of thermonuclear bomb tests" in order to "protect the nation's security" from China. "We are totally naked vis-à-vis China" and its nuclear might, he adds.

The best answer to this bogey comes, ironically, from a security analyst long associated with the bomb lobby. K. Subrahmanyam, in a newspaper article co-authored with scientist V. S. Arunachalam, points out: "... even with 25-kiloton fission bombs, the damages are going to be far more extensive than what Hiroshima and Nagasaki suffered, given the higher population densities in the cities of China and South Asia and the urban development of recent years. Therefore, the Indian deterrent posture will not lose its credibility if India is compelled to rely on fission weapons only."

The article goes on to say what Indian and Pakistani militarists can do to the people of South Asia with the nuclear arsenals they already have. "In a

nuclear war, once the missiles are launched, entire countries on both sides become battlefields. It is difficult to control or regulate the firing of the missiles since both sides are under compulsion to use the missiles before they are eliminated by the enemy strike. As soon as the first city is hit, populations of all cities would attempt to empty out into the countryside since there will be panic that their own city will be the next target in the next few minutes."

The article adds: "Think of the entire urban population of a country becoming internally displaced persons in a matter of hours." The authors, however, do not argue against strategic programs that can bring no security to the region and its people.

Participants in India's main nuclear debate think pretty little about this and other possible fallouts of their folly. The anti-nuclear-weapon activists, meanwhile, can only hope at the most to have their say in the alternative media.

 # A senior journalist and author, National Coordination Committee member of the CNDP.

B. Nuclear Disarmament: Global Perspective

I. Nuclear Zero: Key Issues to be Addressed

George Perkovich#

IN the West today, and perhaps in Russia, leading circles believe that nuclear deterrence is what prevented the U.S. and the Soviet Union from fighting directly during the Cold War. Many assume that these weapons will continue to deter without fail. Both ideas deserve to be questioned.

Is it really true that Soviet leaders were determined to go to war with the United States but were deterred by the existence of nuclear weapons? At what time and place were Soviet leaders willing to go to war against NATO states but chose not to do so because of nuclear counter threats? What specific evidence shows this? There were cases, such as Vietnam and Afghanistan, where the U.S. and the U.S.S.R intervened militarily in other states. Would these interventions have happened if Washington or Moscow did not believe that nuclear deterrence would keep the other side from escalating? By making escalation to homeland attacks unthinkable, did intrawar nuclear deterrence prolong these wars and the damage they did? Is it possible that nuclear deterrence allowed more killing than it prevented during the Cold War? Even if objective scholars conclude that nuclear deterrence did directly prevent war and did not enable low intensity conflicts in the Third World, the future effectiveness of nuclear deterrence remains unknowable.

Nuclear deterrence is effective because it can fail - nuclear weapons actually could be used. The horrifying consequences give pause. Wise human beings should continually examine whether and how the risks of nuclear deterrence are necessary or advisable, and whether the threats nuclear deterrence is supposed to protect against could not be deterred by other means. What made sense decades ago, may not make sense today. What makes sense today, may not be necessary tomorrow.

Allow me to be provocative and suggest that the end of the Cold War should cause us to reexamine our assumptions about nuclear deterrence. For civilized states, nuclear deterrence is credible only if the threatened use of nuclear weapons would be proportional in scale and existential danger to the aggression that stimulated it. Civilized human beings feel that disproportionate and indiscriminate violence are grossly unfair. This demand for proportionality is reflected in legal doctrines of Just War. A civilized state would not threaten to use nuclear weapons in response to economic sanctions, a territorial dispute, or even a conventional military

invasion involving forces not large enough to inflict major territorial losses.

Even uncivilized states - there are a few - should know that if they unjustly used nuclear weapons the international response would be severe. The world's major powers would conclude that such a government should not be allowed to continue. If terrorists are not deterrable, nuclear weapons are not useable to deter them. Some might argue that nuclear weapons could be necessary to preemptively destroy terrorist nuclear weapons, but for this to be a politically feasible option, exceptionally reliable intelligence regarding the precise locations would be required. This sort of intelligence has been absent in Iraq (2003) and in Iran. Moreover, if such reliable precise intelligence were available, it is highly likely that nonnuclear means could be used to destroy such targets, and would be preferred by political leaders.

The taboo against using nuclear weapons has grown steadily stronger since 1945. Taboo is an interesting, important word. According to the Oxford English Dictionary, it means "to give a sacred or privileged character to a thing which … debars it from ordinary use or treatment…. To put a thing under a social ban." War is undertaken to serve policy objectives, to gain power or prevent someone else from taking power from you. States that act unjustly on a grand scale tend to lose power and fail over time. They collapse from within because they cannot mobilize their citizens to work hard and support their government. Or, they fall from external pressure mounted by others determined to balance their power. The nuclear taboo increases the probability other powers would rally against a nuclear aggressor or that a government's own people would turn against it if that government used nuclear weapons unjustly.

At the very least, the nuclear taboo means that nuclear deterrence is only credible against the most massive threats - aggression that has the scale and destructiveness that is proportional to that which would follow from nuclear war. How many such threats do Russia and the U.S. realistically face today? China? India? Pakistan? Israel? France and the U.K.? It is nearly impossible to see major powers committing aggression against each other on a scale to justify the use of nuclear weapons. Maybe they have learned from Germany's catastrophic failures of World War, or Japan's. The threat of nuclear weapons use is an even greater cause of restraint, but it is possible that civilized states have learned in the past one hundred years that major aggression carries enormous costs and provides no lasting benefits. Similarly, the U.S.A and Russia may have learned from their experiences in Vietnam, Afghanistan, and Iraq that invading smaller countries doesn't really pay (even those that do not have nuclear weapons). Globalization should intensify the costs of territorial aggression as economic interdependence, especially in finance, leaves all states susceptible to isolation by others.

Of course, things could change and threats might emerge that could justify nuclear counter threats. But historically, nuclear weapons have not enabled their possessors to conquer and occupy other territories, even those undefended by nuclear weapons. Does any nuclear armed state hold territory or dominion over other people that it did not hold before it acquired nuclear weapons? It is far from clear that a state breaking out from a nuclear disarmed world would be able to sustain aggression against others. In any case, states would not agree to get rid of their last nuclear weapons if they felt that others had the capabilities and motives to commit aggression on a scale that would justify nuclear retaliation. Moreover, such massive scale threats would probably take enough time to develop that we - the United States, Russia, China, etc. - would have warning. If nuclear weapons had been abolished, this warning time would enable disarmed states to regenerate nuclear weapons if they thought it necessary.

Speaking realistically, political and technical realities will not permit the verifiable elimination of all nuclear weapons in the next 10-15 years (or longer). Therefore, it makes sense to examine the challenges that would need to be managed

for all nuclear armed states to move cautiously towards zero by reducing their arsenals to much lower numbers. Amb. Timerbaev points to this challenge when he asks "How, by what principles and in what stages should planned, deliberate and step by step reductions conducted [by all nuclear armed states], so that they may satisfy all the concerned parties and do not violate international and regional stability during the implementation process and beyond."[1]

The following are some of the difficult issues that arise:

Some observers suggest that deterrence would be weakened at low numbers. What scenarios underlay this concern, and are they realistic? How could such concerns be addressed through arms control or other measures?

American and perhaps Russian officials and experts tend to be the ones who assert that low numbers weaken deterrence and invite instability. By contrast, the majority of nuclear-armed states already live with "only" low numbers of nuclear weapons. The U.K. and French governments do not seem terribly worried that their relatively small arsenals will not deter or might invite instability. China has always managed nuclear deterrence with much smaller arsenals than its main potential adversaries possess. India and Pakistan remain in a conflict-prone relationship and possess "low numbers" of nuclear weapons which they do not maintain in a ready to use fashion. Both governments acknowledge that nuclear deterrence has rendered major warfare between them untenable and they have made progress through backchannel negotiations to seek a modus vivendi in Kashmir. While American and perhaps Russian nuclear experts might judge India's and Pakistan's nuclear situations to be inadequate, few urge that India and Pakistan should build larger arsenals, mate warheads to delivery systems, and deploy them in launch-ready configurations. In short, there is plenty of experience around the world since 1945 to suggest that deterrence and stability can be maintained with low numbers of nuclear weapons.

Much more analysis needs to be done on this issue. The simple assertion behind the concern is that low numbers might leave a state vulnerable to a first-strike, especially from a state with a larger arsenal. The vulnerable state would feel greater pressure to use its small arsenal early in a conflict. While this problem deserves expert theoretical analysis, we should pay even more attention to the actual historical experiences of states managing international relations and deterrence with "low numbers" of nuclear weapons, often in asymmetrical equations with adversaries. Moreover, arms control measures and other forms of transparency can be readily imagined to augment the stability of deterrence at low numbers.

Relatedly, some could worry that if a problem developed regarding the reliability of a warhead design in a small arsenal, the overall deterrent would be weakened, whereas with a larger arsenal with multiple designs, redundancy would preserve the deterrent. This "reliability" issue is one reason why some in the U.S. nuclear weapon complex urge development of a new warhead designed for reliability, safety, durability and easy maintenance without nuclear testing.

Advocates say that such a warhead would allow the U.S. to undertake much greater reductions of nuclear weapons. It should be expected that discussions of multilateral nuclear arms reductions would need to address questions of modernization.

How important is parity or disparity in the deterrence doctrines of the various states? At various stages of the Cold War, the U.S. and the Soviet Union managed deterrence without parity. In the middle period - the 1970s and early 1980s - there was approximate parity. In the late 1980s, Soviet officials recognized that "sufficiency" was the more vital criterion than parity. Today, there is growing recognition that in the global context the distinction between strategic and tactical nuclear weapons is meaningless - a nuke is a nuke. In this context, Russia, with its much larger holdings of short-range nuclear weapons, has numerical superiority over the U.S. and NATO, yet this disparity is not perceived to undermine deterrence. Similarly, China is recognized to have a viable nuclear deterrent even though its arsenal is much smaller and more rudimentary

than those of the U.S. and Russia. Indeed, today on a worldwide basis nuclear deterrence is largely based on asymmetric balances. Practice shows there is little reason to accept that parity is necessary for viable nuclear deterrence.

The United States and Russia possess thousands more nuclear weapons than China, the U.K., France, India, Pakistan, Israel and North Korea - including "strategic" and "sub-strategic" and deployed and reserve weapons. How much of a numerical advantage do Washington and Moscow think they need over the others? On what basis would they claim they should be allowed to retain greater numbers? Public sources do not indicate that either government has thought carefully about these questions. Perhaps this is because Moscow and Washington have not yet seriously considered reducing their arsenals to a point where multilateral nuclear arms control would be feasible.

In conversation, U.S. nuclear strategists tend to assert that the U.S.A should retain at least as many nuclear weapons as all other nuclear-armed states combined. For this assertion (and perhaps similar Russian views) to be worthy of serious consideration, other questions such as the ones raised in this essay must be closely analyzed. As a negotiating principle, it is difficult to see how leaders of states with smaller arsenals would agree in a negotiation to accept vast disparities. But perhaps the different security environments and responsibilities of states could be recognized in ways that would enable the nuclear-armed states to negotiate unequal limitations.

Who does each nuclear-armed state think it needs to deter with nuclear weapons? Does Russia need nuclear weapons to deter the United States and China? Anyone else? Does China calibrate its nuclear requirements in comparison to the United States, Russia, India and Japan? Does India determine its nuclear sufficiency relative to China and Pakistan?

A key variable in answering these questions is whether a given state envisions the need to deter more than one nuclear armed adversary at the same time. Would Russia and the U.S. insist on maintaining an arsenal sized to fight two (or more) nuclear adversaries in the same crisis or war, or in two or more simultaneous crises with the potential to escalate to nuclear war?

Presumably Washington would not reasonably claim that it needs nuclear weapons to deter the U.K., France, India or Israel. This immediately puts into doubt the assertion that the U.S.A should retain at least as many nuclear weapons as all others combined (excluding Russia). But if the U.S.A and Russia could conceivably maintain mutual deterrence with, say, 500 total weapons, would the United States then seek an additional allowance to deter China? The answer could be "yes" if realistic threats existed of simultaneous major warfare in Eurasia - between NATO and Russia - in Northeast Asia - perhaps over Taiwan or in a future conflict with D.P.R.K.

Assuming that Russia would "require" at least near-parity with the U.S.A, there is probably a point in a reduction process where Moscow would then say that it needs additional weapons to deter China, too. Would it make a similar claim for additional weapons to deter the U.K. and France, or could this requirement be met with an arsenal matching the United States? If Russia and the U.S. were allowed to have significantly larger arsenals than, say, the U.K. and France, then Russia's concern could be mitigated. But the nearer to parity that the U.S.A and Russia are asked to come with the smaller arsenals, the more likely Washington and Moscow are to resist by emphasizing risks of war against multiple nuclear-armed adversaries.

The Chinese arsenal today is smaller and operationally slower than one might expect in a state that envisions fighting nuclear wars with two adversaries, either simultaneously or one right after the other. Assuming that the United States and Russia further reduced the ratios of their arsenals compared to others before asking others to undertake reductions in a multilateral process, it is not obvious why any of the others should conclude that this would make them less able to deter multiple adversaries than they were before.

India has unresolved territorial issues with both

Pakistan and China, both of whom target nuclear forces at India. To date, India has chosen not to seek an arsenal approximating parity with both China and Pakistan. Such a decision would appear unlikely given India's strategic culture and planning. But would India in negotiations be willing to formally limit itself to an arsenal significantly smaller than those of Pakistan and China combined? As a political matter, it is one thing to choose to build less than rivals have. It is quite another thing to forego the right to do so and accept disparity in a treaty.

We can ask similar questions of each nuclear-armed state and realize that moving from bilateral U.S.-Russian nuclear arms control to multilateral arms control will be a multi-phased, extremely complicated process. It is reasonable to suppose that Washington and Moscow would be willing to approach parity with the next-largest arsenals only if they had significantly greater confidence in the security dynamics in Europe and Northeast Asia. For general strategic political reasons, China would probably not be willing to negotiate reductions without simultaneous improvements in its security relations with the U.S.A, Russia and India. Beijing also would want a clearer sense of positive security trends relating to North Korea, Japan and Taiwan. India would likely require both greater global equity and progress in resolving its security dilemmas with Pakistan and China.

If the necessary combinations of states were satisfied that they could maintain deterrence with uneven numbers, then the political problem of making disparities acceptable could likely be solved. For example, states could negotiate in terms of ratios rather than absolute numbers of nuclear weapons. If the U.S.A and Russia reduced to, say, 500 total nuclear weapons, the ratio

of China's holdings would increase. China would gain parity. Similarly, if China reduced its arsenal somewhat, and India held steady, it would gain parity compared with the position it would have without arms control. Ultimately, the political issue of parity/equality could be addressed by framing multilateral nuclear reductions as a vital step toward the abolition of all nuclear weapons which is the only viable point of nuclear equality.

Rather than avoid this complicated challenge, it might help to think about multilateral nuclear arms control as a process that should begin with preliminary discussions of issues like the ones raised here. An early step would be to identify the various considerations that the U.S.A, Russia, China, France, the U.K., India, and Pakistan would want to have addressed before any negotiations could begin. The six-party talks already provide a forum for addressing North Korea's interests. Israel, because it has not tested or otherwise declared a nuclear-weapons capability, could be addressed in the context of creating a regional zone free of weapons of mass destruction. Such discussions could begin on an informal basis, perhaps through Track I.5 discussions involving well-connected think tanks from each state with government observers.

Some American strategists worry that reductions to, say, 500 total weapons would invite China to rapidly build up its arsenal to reach parity. Does Russia have similar concerns? Does China worry that if it reduced its nuclear arsenal in some formula relative to U.S. and Russian reductions, India could try to build up to parity with China? This concern is frequently expressed in the United States now that elder statesmen such as George Shultz, Henry Kissinger, William Perry and Sam Nunn have urged movement toward a world free of nuclear weapons, and President Obama has signalled his interest in this objective. However, an answer seems obvious: the U.S.A and Russia would not agree to reduce their total arsenals to a level where China could "race to parity" if there were not formal, reliable agreement that China would not do so. And China would not make such an agreement if it did not have confidence that the U.S.A (and others) were not gaining conventional or other military capabilities to negate its smaller arsenal.

How do ballistic missile defences fit into such equations?

If effective ballistic missile defences could be developed that would be able to reliably destroy a high percentage of attacking nuclear weapons in realistic scenarios, an adversary

could feel that its deterrent was jeopardized. This could be destabilizing, or at least could block further reductions of offensive systems. In practical terms today, Russia would not be willing to reduce to low numbers (say 500) if the U.S.A did not put limits on its potential ballistic missile defence capabilities. Nor would China be willing to undertake reductions if Washington was not prevented from developing and deploying systems that could negate a significant percentage of its nuclear arsenal. In short, multilateral reductions to lower numbers will not occur without agreed limitations on ballistic missile defences, or a transformation of strategic relations so that states no longer feel the need to be able to deliver nuclear arms against other states that possess ballistic missile defences.

The ballistic missile defence issue changes form, however, to the extent that the international community seeks the total elimination of nuclear weapons. In a world without nuclear weapons, missile defences could be an insurance policy against anyone who might cheat. One way to proceed could be to accept severe limits on ballistic missile defences in the near-term in order to facilitate multilateral reductions of nuclear arms, and meanwhile to promote cooperation in research, development and potential operations of defences as states agree to work jointly toward nuclear disarmament.

The questions I have explored here are only a few that arise if we seriously try to reduce toward zero the number of nuclear weapons in the world. The U.S.A, Russia and other nuclear-weapon states have an obligation to make this attempt, as agreed in the NPT and the 2000 Review Conference. Analysts, such as Roland Timerbaev and myself, can offer initial questions and answers, but governments are who matter. Today no nuclear-armed state has tasked its defence ministries or think tanks to work through these questions and propose ways of addressing them. Because such serious analysis has not been done within any nuclear-armed state, there has been no discussion of these problems between nuclear-armed states.

This absence of analysis and discussion should be corrected. At a minimum, each nuclear-armed state should commission its relevant government bodies and/or think tanks to begin such studies. Such commissions should be undertaken with the understanding that the results should then be discussed and debated among nuclear-armed states. Where and when it is appropriate, nongovernmental organizations should be invited to join such discussions.

Notes

1 Roland Timerbaev, "Nuclear-Weapon-Free-World: Ways of Moving Ahead", Security Index, No. 2, Spring 2009, p.104.

 # An American analyst and author.

*II. Disarmament Work amidst a Global Economic Crisis**

Andrew Lichterman#

LIKE many of you, I have been coming out here for many years- decades now. But it has perhaps never been so difficult to figure out what to say. The messages I am getting from the Washington-centric world of U.S. arms control and disarmament work make less and less sense to me. There is a curious lack of real urgency, and what urgency there is seems to be to be looking in the wrong direction, away from the greatest dangers.

We likely are facing the beginning of great crisis of our time. Both the economy and the ideology of the great wave of corporate globalization that has come to dominate most of the planet has been greatly shaken, and may be on the verge of collapse. Yet discussions of disarmament seem to proceed as if this doesn't matter, as if very little has changed since two or ten or even fifteen years ago- with the exception of the election of President Obama, whose approach to disarmament generally is viewed as a cause for optimism. There is very little

discussion of how or whether the broader crisis might change the dangers nuclear weapons pose, or how it should affect our strategies for disarmament. So I want to start from where we are, and then to try to place the current round of elite arms control proposals in a broader context that I believe raises questions that are being pushed to the margin of thought.

Almost two decades after the end of the Cold War, the U.S. deploys a force of nuclear weapons numbering in the thousands, on delivery systems originally designed to destroy as much as possible of Russia's nuclear arsenal before it could get off the ground. The U.S. has about 5000 nuclear weapons in its stockpile, about 2700 of them deployed. Thousands more that have been withdrawn from service have yet to be dismantled. Russia has an arsenal of roughly the same size, but both countries are committed under the Moscow Treaty, reached early in the Bush administration, to reaching a limit of 2200 deployed strategic weapons by 2012. The US is believed to have reached that limit already.

But a central goal of U.S. planners is to allow the reconstitution of a larger nuclear arsenal should U.S. decision makers choose to do so. As the head of the National Nuclear Security Administration described it, ". . .the deterrent won't be the old Cold War model based on numbers of weapons, rather it will be the capability to respond to any national security situation and produce those weapons if necessary."[1]

The relatively "small" nuclear arsenals of China, England, France, and Israel number in the low hundreds. India and Pakistan each have tens of atomic weapons. North Korea may have a small number of nuclear explosive devices- less than ten. It is virtually certain that none can be delivered by a missile.

What do these numbers really mean? We learned- or should have learned- from the atomic bombings of Hiroshima and Nagasaki that the nuclear destruction of even a single city remains a horror that defies human comprehension. General George Lee Butler, retired commander of U.S. Strategic Command, calculated that "twenty weapons would suffice to destroy the twelve largest Russian cities with a total population of twenty-five million people-one-sixth of the entire Russian population;"[2]

According to current estimates, a single U.S. Trident submarine now carries 96 nuclear warheads. There are two types of warheads for submarine-launched missiles, one about six or seven times as powerful as the Hiroshima bomb, the other about thirty times as powerful. Two of the 14 Trident submarines the U.S. has today would carry enough warheads to hit every city and town in the U.S. with a population over about 130,000. In California alone, there would be a warhead not only for San Francisco and Los Angeles, Oakland, Sacramento, San Diego and San Jose, but for Pasadena, Fresno and Long Beach, Hayward and Palmdale, Modesto, Stockton, and Salinas, and many more.

It is against this background that we must evaluate the meaning of of the recent spate of elite disarmament proposals, including the recent agreement for negotiation of a successor to the START treaty.

The Joint Understanding for the START Follow-on Treaty signed by Presidents Obama and Medvedev last month commits the United States and Russia to reducing deployed strategic warheads to no more than 1675- seven years from the time the treaty is signed. The treaty would have little real effect on current nuclear weapons deployments, and would not limit several thousand additional nuclear weapons each country keeps in various other accounting categories- tactical nuclear weapons (most more destructive than the bombs that destroyed Hiroshima and Nagasaki), and weapons designated as spares and reserves, likely leaving both countries with thousands more nuclear weapons for many years to come.

There is some talk about going down to 1000 or so weapons without much specificity as to what that really means, but this already appears to be a goal consigned to an even more distant future. A thousand nuclear weapons is enough to destroy the largest country, and quite likely much of the biosphere along with it. And again, when thinking about these

numbers, it is essential to remember that the nuclear weapons establishment and their allies in Congress already are battling to assure that if the numbers of nuclear weapons deployed is reduced, the capacity to build additional warheads should the U.S. decide to do so will be strengthened.

The flurry of elite disarmament proposals we have seen over the last year and a half have two common themes. One is that getting rid of nuclear weapons is a laudable but distant goal. The other is that the United States will have to keep quite a lot of them around as long as anyone has nuclear weapons to assure adequate "deterrence." President Obama's proposals are no different. He describes actual elimination of nuclear weapons as a goal that "will not be reached quickly -- perhaps not in my lifetime."And the White House web site states that "Obama and Biden will always maintain a strong deterrent as long as nuclear weapons exist."

But the reality is, of course, that the US uses its nuclear weapons for far more than what most people would understand as "deterrence."

U.S. military doctrine calls for the use nuclear weapons to "leverage" the power of its conventional expeditionary forces world-wide by having them operate under the "umbrella" of nuclear forces. Hence if U.S. conventional forces are used to attack another country-- including in the course of a war of aggression, like that against Iraq and repeatedly threatened against Iran- the role of nuclear weapons is to "deter deterrence"-- to prevent the use of nuclear, chemical, or biological weapons against US forces, bases, or regional allies, even when the US and/or its allies are the aggressor, and to provide an ultimate threat if conventional forces are in danger of defeat. As one Air Force top level planning document put it,

"The NR [Nuclear Response] CONOPS [Concept of Operations] will provide a credible deterrent umbrella under which conventional forces operate and, if deterrence fails, strike a wide variety of high-value targets with a highly reliable, responsive and lethal nuclear force. Desired effects include: Freedom for U.S. and Allied forces to operate, employ, and engage at will."[3]

The illusion that the only role of U.S. nuclear weapons is deterrence- and the use of the word "deterrence" to obscure the many ways nuclear weapons have been used to threaten, to coerce-is likely to grow even more dangerous in years to come. Nuclear weapons now are integrated into a spectrum of high-tech violence where the US seeks "escalation dominance" at every level of military action-- and in every region of the world, including the home waters and borderlands of other major powers such as China and Russia. Missile defenses and highly accurate long-range missile systems now under development by the United States that may allow destruction of a far broader range of "strategic" targets with non-nuclear payloads add new, inadequately understood factors to this already dangerous mix.

With the world on the brink of an economic and political crisis of a magnitude and kind unseen since the 1930's, those in power may be willing to roll the dice in ways that were unimaginable during the Cold War.

The global scene in some ways resembles that which brought the devastating world wars of the century past. The corporate capitalist system the U.S. has worked to expand and continues to defend now extends to virtually the entire planet. But new economic and military powers are emerging, seeking an increased share of the means needed to create wealth for their elites and to raise the standard of living for the rest of their populations sufficiently to avoid unrest. Older powers are determined to hold on to advantages acquired through centuries of war, conquest, and hard-driving forms of technological and economic development that have enabled them to accumulate great economic and military power, but also have rapidly depleted the resources they directly control. The United States, while still enormously powerful, is on the down slope, a debtor nation dependent on imported resources that has seen much of its manufacturing capacity slip away at the moment of its greatest military ascendance.

In the past, transitions of this kind have brought wars.

These wars, like the economic system that in large part drives them, have become more intense, more total, with both the terrain contested and the energies unleashed encompassing more and more at each turn.

Today, there is no visible alternative on the horizon to global competition among state-cantered or regional aggregations of capital. All states with significant power are controlled by elites who are either ideologically committed to or at the very least seem unable to offer any alternative to the immense power and inertia of the global capitalist system. Over all looms the United States, its rulers self-consciously committed to preserving this system, and possessing a military machine unparalleled in human history.

The military pre-eminence of the country with the largest economy in any given period is not surprising. And an economic system that has unleashed great industrial capacity confers military advantages on the wealthiest states. But there are particularly dangerous new aspects in the current conjuncture. The integrated complex of large-scale science, the military, and high-tech industrial capacity possessed by the United States will take a long time to match. In addition, nuclear weapons now make it possible for an incumbent "great power" to destroy an adversary entirely, and perhaps itself along with it. And even lesser wars in which nuclear weapons are used risk catastrophe that defies comprehension.

All of this makes it appear possible for a declining but still dominant global power to sustain a status quo favourable to its interests for far longer than its economic capacity might otherwise allow. And great danger can come from its elites believing that they can do so, whether it is true or not.

At the same time, global human society is fast approaching resource and ecological limits. While perhaps in principle surmountable by technology and changes in social organization, addressing these problems would require an unprecedented degree of cooperation, democracy, and shared sacrifice both within and among states. The potential for conflict over oil alone is self-evident, shaping the foreign policies and military deployments of the most powerful states over decades and constituting a significant driver for wars large and small, from Iraq to the Sudan.

U.S. elites apparently have decided to exploit what they see as structural advantages conferred by its immense military establishment to extend U.S. dominance for as long as possible. And it should be emphasized that this is not just about the policies of the Bush administration. There is little questioning in the upper echelons of U.S. political elites in either party of the need to maintain global military dominance, and of the right of the United States to use force to further its vision of global "order."

So far, aside from gentler atmospherics, there is not much sign of a major course change from the Obama administration. It has announced plans to expand the size of the military, and has intensified the war in Afghanistan (now extending into Pakistan). The Obama military budget differs only in the details from the Bush Administration budget, continuing military spending that already is almost as large as that of the rest of the world combined- and far larger than any imaginable combination of adversaries. And despite a change in the party holding the majority, Congress is continuing entrenched patterns, with powerful committee members in many instances seeking to restore military appropriations in the few areas that the Obama administration has made cuts, and to protect powerful military industrial complex institutions with which they have close ties.

Ironically, the upcoming arms control negotiations with Russia over START, together with renewed efforts to achieve ratification of the Comprehensive Test Ban, are likely to become opportunities for the nuclear weapons establishment to bargain for more facilities and funding guaranties for nuclear weapons for many years to come. We already are seeing signs of this, with powerful senior congress members and senators from both parties manoeuvring to place language in this year's defence bills to give the nuclear weapons laboratories more voice in policy decisions for maintaining the nuclear

stockpile, and to firmly establish long-range plans for modernization of both nuclear weapons and the facilities to make them.

Here in the U.S., professional arms control elements dominate public discourse of arms control and disarmament. Their approach implicitly assumes that the leading nuclear weapons states will keep civilization-destroying nuclear arsenals numbering in the hundreds or thousands and the institutions to sustain them for a very long time- many decades. Elimination of nuclear weapons is framed largely as an aspirational goal for a distant future. The timeline for nuclear disarmament, to the extent that there is one, is very, very, long.

At the same time, the global political and economic system is characterized by the interplay of strong forces that make war more likely, including wars involving one or more countries that have nuclear weapons.

The potential for the kinds of crisis that in the past brought significant danger of conflict and war among major powers seems to me to be on a much shorter time line - perhaps years, at most a decade or two. Yet many who work in the arms control and disarmament field here in the U.S. behave as if wars among the major nuclear armed-states are virtually unimaginable, a far more manageable "nuclear danger" than that posed by nuclear weapons that don't yet exist- nuclear weapons in the hands of Iran, or of "terrorists."

I believe this is due in part to a fundamental contradiction at the core of much "disarmament" thought-- many proclaim that nuclear weapons are "useless," but at the same time implicitly seem to believe that "deterrence" works, at least among major nuclear-armed states.

But it also is due to the fact that that sustained analysis of why major nuclear armed-states might come to blows in a post-Cold War, thoroughly capitalist world is strangely scarce in arms control and disarmament debate. No one really seems to want to think about how likely nuclear war might be if we reach the point where the ruling elites of nuclear-armed states are facing levels of material competition abroad and socio-economic discontent at home at levels not experienced for generations- since before the nuclear age began. More and more, this period brings to mind historian Eric Hobsbawm's characterization of the years before WWI:

"...[W]hat gave the period its peculiar tone and savour was that the coming cataclysms were both expected, misunderstood and disbelieved. World war would come, but nobody, even the best of the prophets, really understood the kind of war it would be. And when the world finally stood on the brink, the decision-makers rushed towards the abyss in utter disbelief."[4]

I think we need to come to grips with the fact that we live in a time when the gap between the challenges and dangers we face and the usefulness of the solutions we are being offered are perhaps greater than they have ever been. So too the gap between the soothing rhetoric coming from a feel-good President and the reality of the policies that are coming out of Washington.

Ultimately, its not about the rhetoric, but about power. The nuclear weapons establishment constitutes a formidable set of institutions. And they are part of a far broader constellation of powerful institutions and organizations, never far, if at all, out of power, that see their interests as being well served by a mode of US global military dominance ultimately underwritten by nuclear weapons.

Unfortunately, our willingness to name and confront anew the interests served by overwhelming military power in fact seems to be to have declined significantly, and with it the breadth and depth of our disarmament and peace movements. Every year, peace groups observe Martin Luther King's birthday, often conducting public readings of one or another of his great speeches. Sometimes I wonder how closely we are listening, even as we are reading, and if we are willing to take up again the challenge he presented to us.40 years ago now in his Beyond Vietnam speech, King said,

"...[b]y choice or by accident, this is the role our nation has taken: the role of those who make peaceful revolution impossible by refusing to give up the privileges and the pleasures that come from the immense profits of overseas investments.

I am convinced that if we are to get on the right side of the world revolution, we as a nation must undergo a radical revolution of values. We must rapidly begin the shift from a thing-oriented society to a person-oriented society. When machines and computers, profit motives and property rights, are considered more important than people, the giant triplets of racism, extreme materialism, and militarism are incapable of being conquered."[5]

I believe that disarmament initiatives unaccompanied by strong social movements for democracy, global economic equity, and a more ecologically sustainable way of life are highly unlikely to create the political conditions in which significant progress towards disarmament can occur. Our goal must be to better understand what part disarmament work can play in these broader movements for fundamental social change.

We also must take back our politics from the technocrats and professionals, people with little to sell us except how to sell. Their language of "branding" and "entrepreneurship" pervades the political culture, reaching now far into the so-called "nonprofit" sector and even down to community groups. Far too many mouth the words without thinking about what they mean. They are in fact expressions of the corporate attitudes and practices that have pushed our economy into bankruptcy and our ecosphere to the brink of disaster. The path to a more just and peaceful world will be one of cooperation and solidarity, not more competition. The road to Martin Luther King's revolution in values will not be "branded" or advertised.

We face this dangerous and difficult moment without much in the way of recent analysis and discussion that helps us understand the relationship between nuclear weapons and the structures of a global society and politics that are in crisis and are changing fast. In these circumstances, we must discard much of the "expert" analysis, beginning again with what we know about nuclear weapons, what every human being can know about them. As the Russell-Einstein Manifesto put it over a half century ago, "remember your humanity and forget the rest."

Nuclear weapons represent the threat of unlimited violence, and of willingness to sacrifice the people for the State.[6] The decision to acquire nuclear weapons raises to the level of an absolute the willingness of those in power to risk all of us, and everything, to achieve their ends.

And it is a decision that in every case has first been taken in secret, with neither the means nor ends open to question, much less choice, by the vast majority of those affected. Both the decision to acquire nuclear weapons and the manner in which it always is taken should tell us that the "state" that we live in significant ways does not "represent" us. We must understand that it represents someone, or something, else- and that our very survival may depend on finding out who or what, and doing something about it.

This is what it means for the state we live in to have nuclear weapons, at the simplest and most basic level. It is in this context that educating ourselves and others about the terrible realities of nuclear warfare can have positive meaning. This must not, however, be the end of the discussion, but the beginning. Stopping here, we risk contributing to a climate of fear and hopelessness that can demoralize those we hope to organize, and that can reinforce the fear-based ideologies of those who offer more armaments as the only "practical" form of "security" in a dangerous world. Starting here, we can begin to understand the violence that sustains both stratified societies and the inequities of the global system as a whole.

**** Text of address outside the Lawrence Livermore National Laboratory, Hiroshima Day, August 6, 2009.***

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Notes:

1. Address by Thomas P. D'Agostino, Administrator, National Nuclear Security Administration, "Complex Transformation and Strategic Weapons in the 21st Century," Strategic Weapons in the 21st Century Conference Sponsored by Los Alamos National Laboratory and Lawrence Livermore National Laboratory, January 31, 2008

2. General George Lee Butler, Speech at the University of Pittsburgh, May 13, 1999.

3. United States Air Force Strategic Planning Directive for Fiscal Years 2006-2023 p.20. Fore more on this point, see. Andrew Lichterman, "Delivery Systems," in John Burroughs and Michael Spies, eds., Nuclear Disorder or Cooperative Security: U.S. Weapons of Terror, the Global Proliferation Crisis, and Paths to Peace (New York: Lawyers Committee on Nuclear Policy, Western States Legal Foundation, and Reaching Critical Will project of the Women's International League for Peace and Freedom, 2007) 105,114-115.

4. Eric Hobsbawm, The Age of Empire: 1875-1914, (Vintage Books, New York: 1989), p.10.

5. Martin Luther King, "Beyond Vietnam," Delivered 4 April 1967, at a meeting of Clergy and Laity Concerned at Riverside Church in New York City

6. This concept is drawn in part from a yet unpublished draft paper by Kumkum Sangari, "The Place of Gender: Systemic Violence and the Nuclear Threat."

III. Declaration of the International Meeting 2009 World Conference against Atomic and Hydrogen Bombs

Call for Global Solidarity and Actions for a World without Nuclear Weapons

WITH the passing of 64 years since Hiroshima and Nagasaki were attacked with atomic bombs, the world is at a juncture of decisive turn towards the abolition of nuclear weapons. The voices of the Hibakusha that "the humans cannot coexist with nuclear weapons" are developing into the opinion of the vast majority of the peoples around the world, and are stirring international politics. We call on all the people around the world to work in global solidarity to open a new page in history towards a nuclear weapon-free world.

With the movement of peoples against war and the threat of nuclear weapons and in support of a nuclear weapon-free, peaceful world, the world is undergoing a big change.

In April, US President Obama stated that as the only nuclear power to have used a nuclear weapon, the US has a "moral responsibility to act", and declared that it would "seek the peace and security of a world without nuclear weapons." We welcome his affirmation as one by the leader of the largest nuclear power for the elimination of nuclear weapons, as well as his call to the world for cooperation. The system in which only a small number of countries keep possessing nuclear arsenal is unsustainable and dangerous. The elimination of nuclear weapons is the only way to prevent further proliferation. This is more and more widely supported in other nuclear powers and their allies, including some political leaders and elder statesmen.

It is a world where no country has nuclear weapons and where peace and security do not rely on nuclear weapons that the Hibakusha of Hiroshima and Nagasaki, the anti-nuclear and peace movements around the world, non-nuclear or non-aligned countries, and most people around the world have long desired and demanded. We must strengthen our action to achieve this goal.

A nuclear weapon-free world can be achieved only by making it a common goal, by working out an agreed legal framework, and by implementing it in good faith. For this, we urge the US and the other nuclear weapons states to implement the "unequivocal undertaking" to eliminate nuclear weapons, and urge the next NPT Review Conference in May 2010 to take a firm step forward towards swiftly concluding a treaty, a nuclear weapons convention, to ban and eliminate nuclear weapons.

We welcome the agreement of the US and Russian leaders on the reduction of strategic nuclear weapons, and urge them to take more bold steps to move towards the goal of Zero. We further urge an early ratification and entry into force of the

CTBT, the conclusion of a verifiable Fissile Material Cutoff Treaty, the renunciation of the first use of nuclear weapons, ban on use or threat to use nuclear weapons against Non-Nuclear Weapons States, as well as the creation of a nuclear weapon-free zone in the Middle East. These partial and specific measures of nuclear disarmament should be promoted, explicitly linked with the goal of the elimination of nuclear weapons.

To achieve a nuclear weapon-free world, we must break away from the notion of "nuclear deterrence" or any other fallacies that regard nuclear weapons as means for security. Possession of enormous amount of nuclear weapons or the reliance on the "nuclear umbrella" provided by a superpower for the pretext of peace and security only leads to more tension and nuclear proliferation. The modernization, maintenance and consolidation of existing nuclear arsenals, the increase in funding for military, the nuclear proliferation in the name of civil nuclear cooperation should be stopped immediately.

We protest against North Korea's nuclear weapons development and urge it to return without delay to the Six-Party Talks on the denuclearization of Korean Peninsula, abandon its nuclear development program and join the global effort to abolish nuclear weapons.

There can be no military solution to proliferation problems. Dialogue and consultation are the only way.

Despite being the only A-bombed country, Japan keeps relying on the U.S. "nuclear umbrella". This attitude places a serious obstacle in the way to achieve a nuclear weapon-free world. We express our solidarity to the Japanese movement working for a breakaway from the "nuclear umbrella" and achieving a nuclear-free and peaceful Japan based on the "Three Non-Nuclear Principles" and Article 9 of its Constitution.

Moving away from a devastating nuclear horror to a peaceful world without nuclear weapons, we must make the NPT Review Conference, in May 2010, in New York, a historic turning point.

The Abolition 2000, an international network of anti-nuclear peace movements, set May 2, 2010 an "International Action Day for a Nuclear Weapon-Free World" and together with the United for Peace and Justice called for a major New York Action and a joint presentation of signatures and petitions for the abolition of nuclear weapons to the U.N. We welcome this initiative, and call for diverse and creative joint actions from grass-roots, with the international signature campaign "For a Nuclear Weapon-Free World" as the common form of action.

We will work in solidarity with the International Campaign to Abolish Nuclear Weapons (ICAN), the 2020 Vision Campaign by the Mayors for Peace, Nuclear Abolition Flame campaign, Scientists for a nuclear weapon-free world campaign and with all other movements leading to the abolition of nuclear weapons.

We work in firm solidarity with the movements of the Hibakusha of Hiroshima and Nagasaki, and of nuclear victims all over the world. The Hibakusha, despite the deep scars inscribed in their minds and bodies, have continued to appeal for the elimination of nuclear weapons as living witnesses of the nuclear destruction. Humanity must respond to their message, draw lessons from their experiences and forge a firm will to realize a world without nuclear calamity.

We will work in solidarity with other campaigns for peace and against war; for relief of Agent Orange and other war victims; for protection of the global environment, for women's agendas; for overcoming poverty, unemployment and hunger; and for drastic cuts in military spending. Joining forces, let us build a nuclear weapon-free, peaceful and just world.

This is the future that humans must achieve. We ardently support the activities of the young people, bearers of future, with full of creativity and energy, and call on them to join in this effort. With the Hibakusha and young generation, let us rise in action now.

August 5, 2009

International Meeting, 2009 World Conference against A & H Bombs (in Hiroshima)

IV. A Major Step Forward on Nuclear Nonproliferation and Disarmament

David Krieger#

THE five permanent members of the United Nations Security Council possess over 98 percent of the more than 20,000 nuclear weapons in the world. Today [September 24], President Obama led a session of the Council focusing on nuclear nonproliferation and disarmament. The other heads of state of the member states on the Security Council joined him for that meeting.

The Security Council is the organ of the United Nations with "primary responsibility for the maintenance of international peace and security…." The Council has not been pressing for nuclear disarmament because its five permanent members (US, Russia, UK, France and China) are the five principal nuclear weapons states in the world. These five states are required by the nuclear Non-Proliferation Treaty (NPT) to pursue good faith negotiations on nuclear disarmament, but they have been dragging their feet and consequently they've placed the NPT in jeopardy. There are four additional nuclear weapons states that are not parties to the NPT (Israel, India, Pakistan and North Korea). These states must also be brought into any serious effort to prevent nuclear proliferation and achieve nuclear disarmament.

President Obama has called for action to achieve a nuclear weapons-free world, but has indicated that it might not be possible within his lifetime. At this special meeting of the UN Security Council, President Obama had a major platform to lead in his pursuit of that goal. He made clear on this global stage that nuclear non-proliferation and disarmament efforts can no longer be deferred without serious consequences for the human future. He underlined the continuing dangers to present and future generations that demands deliberate and urgent action. Bringing these issues to the UN Security Council opens the door for the Council itself to become far more active in pursuing nonproliferation and disarmament, including taking the following steps.

First, reaffirm the 1996 advisory opinion of the International Court of Justice: "There exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control."

Second, make commitments by the permanent members of the Council to never use nuclear weapons against non-nuclear weapons states that are parties to the NPT, and pledge policies of No First Use of nuclear weapons under any circumstances.

Third, endorse the five-point program proposed by UN Secretary General Ban Ki-moon, including engaging in negotiations on nuclear disarmament; strengthening security through the nuclear disarmament process; attaining universal membership in multilateral treaties; acting with transparency; and anticipating dangers from other weapons, including eliminating other weapons of mass destruction and limiting missiles, space weapons and conventional arms.

Fourth, instruct its Military Staff Committee, in accordance with the UN Charter, to work out a plan for the total elimination of nuclear weapons and bring this plan back to the Security Council for implementation and enforcement.

Fifth, exercise control over the process of nuclear disarmament, overseeing the manner in which inspections are carried out to assure that weapons are not retained or reintroduced.

Based on today's unanimous passing of UNSC Resolution 1887, we can share the hope that progress on nuclear disarmament in the Security Council will continue. A bold start has been made and the members could agree to hold such meetings in the future on a regular basis to assure that the task of eliminating nuclear weapons receives high priority among the major threats to global security.

President Obama should be thanked for his initiative in convening and chairing this meeting of the Security Council. What has been missing up to now has been the leadership and political will to move forward the nuclear disarmament agenda. President Obama has demonstrated this leadership. Now it is time for other governments and for ordinary citizens to demonstrate the necessary political will to support this leadership to achieve a world free of nuclear weapons.

 # President of the Nuclear Age Peace Foundation (www.wagingpeace.org) and a Councilor on the World Future Council.

V. At Historic Summit, Security Council Passes Resolution to Limit Nuclear Proliferation

Democracy Now! interviews John Burroughs#

THE UN Security Council has unanimously passed a US-drafted resolution aimed at shoring up the international commitment to limiting the spread of nuclear weapons. But critics say it failed to include mandatory provisions that would have required nuclear states to take concrete disarmament steps. We speak to John Burroughs, executive director of the Lawyers' Committee on Nuclear Policy. He recently met with several UN missions of Security Council members regarding the nuclear vote.

JUAN GONZALEZ: The United Nations Security Council held a special summit Thursday to discuss nuclear nonproliferation and disarmament. It was an extraordinary meeting on another front. President Obama became the first US president to chair a UN Security Council summit, and the meeting marked only the fifth summit-level meeting of the council in its sixty-three years of existence.

The Security Council unanimously passed a resolution aimed at shoring up the international commitment to limiting the spread of nuclear weapons. While the resolution did not mention Iran and North Korea, several world leaders, including President Obama, referred to the nations in their remarks.

PRESIDENT BARACK OBAMA: We've made it clear that the Security Council has both the authority and responsibility to determine and respond as necessary when violations of this treaty threaten international peace and security. That includes full compliance with Security Council resolutions on Iran and North Korea. Let me be clear, this is not about singling out individual nations. It is about standing up for the rights of all nations who do live up to their responsibilities.

JUAN GONZALEZ: The US-drafted resolution calls for further efforts to achieve "a world without nuclear weapons." But critics of the resolution said it failed to include mandatory provisions that would have required nuclear weapons states to take concrete disarmament steps. The resolution also lacked any call on nuclear states to halt production of fissile materials for nuclear weapons.

We're joined by John Burroughs, executive director of the Lawyers' Committee on Nuclear Policy. He recently met with several UN missions of Security Council members regarding the summit.

Welcome to Democracy Now!

JOHN BURROUGHS: Yes, good morning.

JUAN GONZALEZ: Well, your reaction to this unprecedented agreement?

JOHN BURROUGHS: Right. Well, it was really an astonishing time. It was the first time that heads of states have gathered to address the question of nuclear weapons, just on its own. And it was a time when President Obama was following through on his April 5th, 2009 speech in Prague, where he declared the goal of achieving a world free of nuclear weapons. And he said some very strong things there. He said that as the only nuclear

power to have used nuclear weapons, the United States has a responsibility to act. So the Obama administration was showing we are determined to go forward with acting.

And the resolution did call for a ratification of the Comprehensive Test Ban Treaty. It did call for negotiation of an agreement banning production of fissile materials for weapons. It did welcome US-Russian talks on reductions. But, as you said in your introduction, it really was not transformational. It was more, in a sense, a sort of an affirmation of the existing agenda, and that includes Security Council action and resolutions over the last decade or so aimed at stopping the spread of nuclear weapons and preventing their acquisition by terrorists. And the resolution, in fact, had a few new wrinkles in that regard.

JUAN GONZALEZ: What about the issue that the following day, then the President-or the Times, New York Times is reporting now that the Obama administration is-will be accusing Iran of having a secret production facility, an underground production facility?

JOHN BURROUGHS: Boy, that's big news. I didn't catch that.

What's happening with Iran is that there is a meeting of the permanent five members of the Security Council, plus Germany, the United States included, early next month, and it seems that the plan is, if Iran doesn't agree to limits on its nuclear program, that the United States is going to push for strengthening already fairly serious sanctions against Iran.

Frankly, you know, I'm not sure this whole approach is going anywhere. And one of the things that came up, interestingly, in the discussions by the leaders in the Security Council was the fact that both Iran and North Korea have been ignoring or defying Security Council resolutions over the past few years. And as Obama and the French leader and others were indicating, this calls into question the effectiveness of the Security Council. One of the things I think that needs to happen is the Security Council has to become more representative of the world. Why aren't, you know, India and Brazil and Indonesia-why don't they have some status in the Security Council, as well? I think that would make it more legitimate with respect to questions like Iran and North Korea. However, there was no mention of such changes yesterday.

JUAN GONZALEZ: And the issue of, obviously, that there are no-nothing is mandating any of the governments to begin a process of either reducing, those who already have nuclear weapons, or stopping any kind of development efforts in terms of nuclear weapons?

JOHN BURROUGHS: Well, the entire resolution was in the form of calls, welcomes, urges, encourages; it didn't have any mandatory provisions at all. This is in contrast to resolutions that have been adopted regarding Iran and North Korea and terrorists over the past few years. So it wasn't only on the disarmament part that it wasn't mandatory.

But the basic point is certainly important, and that is that, you know, Obama has had just beautiful rhetoric, marvelous rhetoric, on the need to move towards a nuclear weapons-free world, but the agenda for doing so, so far, is pretty limited. And to be fair, you know, it's a tough thing to get even things like the Comprehensive Test Ban Treaty or reductions with Russia approved in the US Senate, and probably, the Obama administration wants to get those things in hand before moving further. But the fact remains, if you're in the rest of the world, you look at this resolution, and you say, "This seems to be mostly about preventing the spread of nuclear weapons. What about the weapons that are in the hands of the existing nuclear powers?"

JUAN GONZALEZ: What does the resolution say about those countries that are not part of the Nuclear [Non-]Proliferation Treaty, countries like Israel or, you mentioned, North Korea, India and Pakistan?

JOHN BURROUGHS: Right. Well, North Korea has announced its withdrawal from the treaty, but that's still subject to negotiation as part of the six-party talks.

But one of the disappointments about the resolution was that it did not include any reference to the need to achieve a zone free of nuclear weapons in the Middle East. This would not have been a new step; it's something that the Security Council itself has

called for in the past. It's something that's been called for in the context of the Non-Proliferation Treaty. But no mention of it, despite the fact that President Obama spent a lot of time in his speech to the General Assembly on Wednesday talking about the Israel-Palestine conflict and bringing that to an end. So, that was lacking, the nuclear weapon-free zone in the Middle East.

There was a call on all the countries outside the Non-Proliferation Treaty to join it. That's sort of pointless in the case of India and Pakistan. They're going to see-have to see progress towards global elimination of nuclear weapons before they're going to really want to play ball.

JUAN GONZALEZ: And in terms of-how dramatic a change is US policy now on this issue compared to the previous administration?

JOHN BURROUGHS: Oh, it's a new world. It is a complete reversal of Bush administration positions on a wide range of fronts. And there's the very strong commitment to notions of cooperation and international rule of law. As I've already indicated, so far, the concrete measures that the Obama administration has been talking about, they're just-they go back to Clinton administration positions, the Test Ban Treaty, the Fissile Materials Treaty, US-Russian reductions. So, in that sense, it's been sort of a resuscitation of Clinton administration positions, but I think the potential is there for much more.

JUAN GONZALEZ: And in terms of where this resolution goes from here? Is there any-are there any planned UN actions after this at all?

JOHN BURROUGHS: Well, the Security Council said in this resolution that it remains seized of the matter, but they did not establish a subsidiary body, you know, a committee of the Security Council to deal with these matters. They didn't say, "We're going to meet again at a certain point." I think we're probably going to see some follow-up in the Security Council at some point, but the next big step is the Non-Proliferation Treaty review conference next spring.

JUAN GONZALEZ: Well, I want to thank you very much for being with us, John Burroughs, executive director of the Lawyers' Committee on Nuclear Policy.

 # Executive Director of the New York-based Lawyers' Committee on Nuclear Policy

[Source: Democracy Now! September 25, 2009.]

VI. World Nuclear Forces Today

Shannon N. Kile, Vitaly Fedchenko and Hans M. Kristensen

AT the start of 2009 eight states possessed nearly 8400 operational nuclear weapons (see table 8.1). Nearly 2000 of these nuclear weapons are kept at a state of high operational alert. If all nuclear warheads are counted--operational warheads, spares, those in both active and inactive storage, and intact warheads scheduled for dismantlement--the United States, the Russian Federation, the United Kingdom, France, China, India, Pakistan and Israel together possess a total of more than 23 300 warheads.

All five legally recognized nuclear weapon states, as defined by the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (Non-Proliferation Treaty, NPT)--China, France, Russia, the UK and the USA--appear determined to remain nuclear powers and are either modernizing or about to modernize their nuclear forces.[1] At the same time, Russia and the USA are in the process of reducing their operational nuclear forces from cold war levels as a result of two bilateral treaties--the 1991 Treaty on the Reduction and Limitation of

Strategic Offensive Arms (START Treaty) and the 2002 Treaty on Strategic Offensive Reductions (SORT).[2] Sections II and III of this chapter discuss the composition of the deployed nuclear forces of the USA and Russia, respectively. The nuclear arsenals of the other three nuclear weapon states are considerably smaller, but all three states are either deploying new weapons or have announced their intention to do so in the future. Sections IV-VI present data on the delivery vehicles and war-head stockpiles of the UK, France and China, respectively.

Reliable information on the operational status of the nuclear arsenals and capabilities of the three states that have never been party to the NPT-- India, Israel, and Pakistan--is difficult to find. In the absence of official declarations, the available information is often contradictory or incorrect. India and Pakistan are expanding their nuclear strike capabilities, while Israel appears to be waiting to see how the situation in Iran develops. Sections VII-IX provide information about the Indian, Pakistani and Israeli nuclear arsenals, respectively.

World nuclear forces, by number of deployed warheads, January 2009

All figures are approximate.

Country[a]	Year of first nuclear test	Strategic warheads	Non-strategic warheads warheads	Total deployed
United States	1945	2 202	500	2 702[b]
Russia	1949	2 787	2 047	4 834[c]
United Kingdom	1952	160d	-	(160)
France	1960	300	-	(300)
China	1964	(186)	. .e	(186)
India	1974	-	-	(60-70)[f]
Pakistan	1998	-	-	(60)[f]
Israel	. .	-	-	(80)[f]
Total				(8 392)

( ) = uncertain figure.

a: North Korea conducted a nuclear test explosion in 2006 but there is no public information to verify that it has operational nuclear weapons.

b: The total US inventory is c. 9400 warheads, of which c. 5200 are in the Department of Defense stockpile (c. 2700 operational and c. 2500 in reserve) and 4200 warheads are scheduled to be dismantled by 2022.

c: The total Russian inventory contains c. 13 000 warheads, of which c. 8166 are in reserve or awaiting dismantlement.

d: Some warheads on British strategic submarines have sub-strategic missions previously covered by tactical nuclear weapons.

e: The existence of operational Chinese non-strategic warheads is uncertain.

f: The stockpiles of India, Pakistan and Israel are thought to be only partly deployed.

Note:

1 According to the NPT, only states that manufactured and exploded a nuclear device prior to 1 Jan. 1967 are recognized as nuclear weapon states. For a summary and other details of the NPT see annex A in this volume.

**** Source: SIPRI Yearbook 2009.***

C. Struggle against Nuclear Power

I. Delhi Rally on October 2

by National Alliance of Anti-nuclear Movements

CONCEPT NOTE

SOON after Independence, the 'Indian Atomic Energy Commission' was set up in August 1948 in the new and fledgling Department of Scientific Research. But it was only on August 3, 1954 the fully-fledged Department of Atomic Energy (DAE) was created under the direct control of the Prime Minister through a Presidential Order. The Atomic Energy Commission (AEC) itself was established in the Department of Atomic Energy by a Government Resolution of March 1, 1958. Just three months after the DAE was established, Prime Minister Jawaharlal Nehru unequivocally declared in a conference on 'Development of Nuclear Power for Peaceful Purposes': "We want to utilise atomic energy for generating electricity because electricity is most essential for the development of the nation."

Long on Talk, Short on Performance

Quite contrary to all the fanfare and high-pitched public relations exercises by the DAE, it is one of the most under-performing sectors in India. Just to illustrate, in 1954 a grand three stage program for development of nuclear power was announced. It had at that time been projected that there would be 8000 MW of nuclear power in the country by 1980. As the years progressed, these predictions were to increase. By 1962, the prediction was that nuclear energy would generate 20-25,000 MW by 1987 and by 1969 the DAE predicted that by 2000 there would be 43,500 MW of nuclear generating capacity. All of this was before a single unit of nuclear electricity was produced in the country.

As against these promises, the installed capacity in 1979-80 stood at about 600 MW, about 950 MW in 1987 and 2720 MW in 2000. The only explanation that the DAE has offered for its failures has been to blame the cessation of foreign cooperation following the 1974 nuclear weapons test. At the same time, these sanctions also provided the DAE with an opportunity: each development, no matter how small or routine, could be portrayed as a heroic success, achieved in the face of staunch opposition by other countries and impossible odds, while any failures could be passed off as a result of the determination of other countries to block and prevent India achieving technological advancement. Such continuous failures were, however, not because of any paucity of resources. All governments in New Delhi have favoured nuclear energy and the DAE's budgets have always been high except for a brief period in the early 90s.

Currently 17 nuclear power reactors produce 4,120 MW (2.9% of total installed base - as against the current installed base of renewable energy being 13,242 MW which is 7.7% of total installed base with the southern state of Tamil Nadu contributing nearly a third of it, largely through wind power). The DAE is planning to set up 20 units of indigenous 700 MW of pressurised heavy water (PHWR) type reactors. The DAE hopes to be overseeing a $100 billion investment in nuclear energy in the coming decade and importing some 40 light water reactors that will help India stabilize its demand for power by 2020. The DAE predicts that the nuclear share of electricity by 2020 would be 35,000 MW.[1]

Big Plans for the Near Future

According to the present DAE chief, India's Pressurised Heavy Water Reactors (PHWRs), which use natural uranium as fuel, "are world class." He claims further: "Our Fast Breeder Reactors (FBRs) are globally advanced. Our Advanced Heavy Water Reactor (AHWR) is globally

unique." He contends that the FBRs would use plutonium-uranium oxide as fuel and the AHWR would have thorium as fuel.2 Even as the DAE expects to "overcome all the problems" by 2012-2013 relating to the shortage of natural uranium that has led to a drop in the capacity factor of the reactors, they are making grandiose claims on thorium as nuclear fuel. The DAE chief claims: "In technology terms, we have mastered thorium technology to get energy from it. We have small unit where we use U233 fuel extracted from thorium. We have mastered all aspects of thorium-based energy. It is on a small scale, we have to expand it."[3] The DAE leader argues further: "We cannot afford to hasten the thorium programme and we have to go step by step to get to use the thorium for the next 200 years."[4]

The DAE has claimed that the PWR, built by the Bhabha Atomic Research Centre (BARC), forms the powerhouse of INS Arihant, India's indigenously built nuclear-powered submarine. It was a joint endeavour of the DAE, the Navy and the Defence Research and Development Organisation (DRDO). But the Director of BARC has admitted that "we have used the Russians as consultants."5 The DAE chief claims "We have the technical expertise and capability to build nuclear-powered aircraft carriers and warships of global standards." He declares, "When the government asks us to build such ships, we will do it... we are confident that we can build even supply propelling energy for aircraft carriers."6 Now the Indian Space Research Organization (ISRO) and BARC scientists also plan to power some parts of Chandrayaan II, an unmanned mission to the Moon, with nuclear energy.7

With the clinching of the nuclear deal with the United States and consequent waiver by the 45-member Nuclear Suppliers Group (NSG) on September 6, 2008, India is now projected to generate an additional 25,000 MW of nuclear power by 2020. Two sites --in Gujarat (Mithibor in Bhavnagar district) and Andhra Pradesh (Visakhapatnam and Srikakulam districts)--reportedly stand "earmarked" for the US companies such as General Electric-Hitachi and Westinghouse in the wake of the July 2009 visit by Hillary Clinton. A French nuclear company Areva has been setting up plants at Jaitapur in Ratnagiri district of Maharashtra, and at least four additional reactors are in the pipeline from Russia for Koodankulam in Tirunelveli district of Tamil Nadu. This is an extremely ambitious and massive expansion program.

Similar large-scale expansion plans are on in the Uranium mining sector also. The DAE claims that the capacity of the reactors would go up because the capacity of the mills at Jaduguda in Jharkhand that convert natural uranium into yellow cake has been augmented. Another mill at Turamdih in Jharkhand has been commissioned and its production of yellow cake is also said to be going up. The expansion program at Jaduguda is said to be complete and the Turamdih expansion will be completed in 2010. The uranium mine and the mill constructed at Tummlapalle in Kadapa district in Andhra Pradesh is expected to go on stream in 2013.8 Exploration mining is taking place at Gogi (near Gulbarga) in Karnataka, and at Domiasiat in West Khasi Hills district of Meghalaya.9

Nuclear Nirvana?

Nuclear energy is being bandied about as THE panacea for all of the country's ills and evils. It is projected as the single solution for the nation's lack of energy security, military security and the over all national security. All this in a country where hundreds of millions of people do not have food security, water security, sanitation security, other basic needs of life or human dignity! In the ruling classes' colonial mode of thinking, "the quality of life greatly depends on amount of energy spent."10 For a developing country such as India that has many other pressing needs like food, housing, education, health, transportation and so on, energy alone cannot and should not be a top priority.

When all is said and done, nuclear energy certainly cannot be the answer for our energy needs because of several important reasons:

[1] High Cost: Nuclear energy was once promoted as something which will be "too cheap to meter" but it has actually become "too costly to

matter." The most conservative estimate has it that one MW of nuclear energy costs approximately Rs. 6.5 crores. This is definitely more expensive than thermal, hydro and other sources of power. If you factor in reactor construction delays, the exploding costs of material, governmental subsidies, departmental mess-ups, waste management costs, decommissioning expenses, and the other "usual" mega-project costs such as PR expenses, bribes, commissions, kick-backs and so forth, nuclear energy is prohibitively expensive. Moreover, governments all over the world enormously subsidise nuclear power to the tune of hundreds of crores of rupees. These subsidies include taking on the costs for research, radioactive waste management, security, decommissioning, liabilities and so forth. The health costs associated with the radiation emitted routinely at each stage of the nuclear cycle are not even taken into consideration; in fact, they are not even admitted by governments. Furthermore, importing Uranium, reactors and other assorted technologies from foreign companies will impose a huge economic burden on the "ordinary citizens" of India while those companies reap high profits at our cost.

[2] Dangerous Waste: Each 1000 MW nuclear power plant generates 30 tons of extremely potent radioactive waste annually. There is no way known to safely dispose this deadly material, which remains radioactive for tens of thousands of years. Since there is no way of removing the radioactive nature of these wastes, exposure to these wastes will continue to be harmful to humans and other forms of life for hundreds of thousands of years. The wastes will therefore have to be isolated from human contact and constantly monitored, as there is no known way of safely storing these wastes for such lengths of time. This need for stewardship is unprecedented in human history. This is also clearly iniquitous to future generations since they would bear the consequences while we use the electricity generated by these reactors. Ethical dilemmas aside, no technology that generates such long lived radioactive wastes can be considered environmentally sustainable. At present this waste is stored near the reactors in huge cooling pools. Were an accident to happen in one of these fuel pools, it would make Chernobyl look benign!

The DAE does not reveal what they do with the nuclear waste or how they will deal with the huge amounts of waste that will be produced by all the upcoming nuclear power plants. The director of Indira Gandhi Centre for Atomic Research (IGCAR) has recently denied news that radioactive waste from IGCAR and other nuclear sites all over India are brought to Kalpakkam and disposed into the sea.11The DAE is yet to reveal to the public what they plan to do with the radioactive waste and how the safety of our people, our children, our grandchildren and the successive generations will be safeguarded for the next 48,000 years.

[3] Safety Issues: Serious hazards are associated with Uranium mining, reactor safety (with the possibilities of damage due to accidents, breakdowns and natural disasters like earthquakes and tsunami), nuclear installation security (with the possibilities of damage due to sabotage, terrorist acts, aerial/missile attacks, or war-time assaults), and short and long-term waste disposal. No one can honestly claim that all these problems of safety and security have been overcome. Neither can anyone guarantee absolute safeguards against the above possibilities. In fact, a major accident in a nuclear power plant would surely be catastrophic in nature as was amply demonstrated by the Chernobyl accident on April 26, 1986. (This is why and how nuclear industry is unique in that no insurance company insures a nuclear power plant). And this possibility alone, which can never be ruled out, disqualifies nuclear power as a rational option.

[4] Health Hazards: Even if the nuclear power plants are operating normally, at each stage of the huge complex process involved in generating electricity from Uranium, called the nuclear fuel cycle, enormous amount of radiation routinely leaks into the atmosphere. Miners in the uranium mines are exposed to high levels of radiation; a very large number of them die of cancer. The thousands of tons of radioactive

waste from the ore is left in the open near the mines, to pollute the air, soil and water, affecting millions living near the mines. At the nuclear power plant, highly radioactive gases are regularly released into the atmosphere, and the radioactive cooling water is routinely released into nearby rivers, lakes and seas. Thus, even without an accident, the deadly concoction of radioactive elements created in the fission reaction find their way into the atmosphere and ultimately into the food chain and the human body! A heavy dose of radioactivity will cause "radiation sickness" and bring about immediate death. Lower doses can cause fatal cancers, leukaemia, and genetic defects that may not show themselves for 20 years or more and result in delayed death. The carcinogenic hazard associated with nuclear installations is quite severe.

[5] Environmental Impact: Uranium mining, thorium extraction, emissions from the nuclear power plants, waste dumping and nuclear weapons production all have a serious impact on our natural resources such as the air, the sea, fish catch, the land, ground water, food production, farm animals and so on. These operations have dangerous impact on our people, especially women, children, marginalized communities such as the tribals, dalits and fisherfolk in places like Jadugoda, Hyderabad, and the coastal villages of Orissa, Andhra Pradesh, Tamil Nadu and Kerala. The nuclearization of India exhibits a blatant disregard for the overall environment and for the human rights of millions of people. The land rights, water rights, right to life and livelihood are all seriously impeded by the nuclear estate and its institutions and agents.

[6] 'Developmental' Perils: All the nuclear installations and activities will displace hundreds of thousands of people across the country. Many more people will lose their traditional livelihood activities and there will be a very high people-cost in our highly and densely populated country. Moreover, with highly centralised power generation, nuclear power would militate against decentralised development and further accentuate the "development" pattern, which, in the first place, has brought the humanity to the brink of total ecological destruction. Thus nuclear power is neither 'green' nor 'sustainable' and is definitely NOT a valid answer for climate change concerns.

[7] Decommissioning Woes: Our future governments will have to incur heavy expenses to decommission the nuclear power plants, maintain those installations and keep them safe for the public for years to come. Similarly, our future generations will have to deal with this deathly heritage just so we can have electricity for 40 years.

[8] Deadly Weapons & Arms Race: Worst of all, nuclear energy has a strong technical linkage with and thereby provides a strong push for nuclear weaponization program and India itself is a graphic illustration. We are being pushed into a nuclear arms race with both Pakistan and China that renders us all more impoverished, vulnerable and unsafe.

[9] Wrong Choice: Contrary to the "nuclear renaissance" claims, many countries around the world are phasing out nuclear energy because of the high cost, waste management issues and other complexities. The United States has not constructed a new nuclear power plant for more than 30 years and Russia has not erected a new plant since the Chernobyl accident in 1986. When we should be focussing on renewable sources of energy, planning micro generation of power, and emphasizing demand-based local generation through appropriate technology with popular participation, we are being forced to accept supply-based centralized power generation with dangerous advanced technology and absolute elite control. Squandering the chance to focus on sustainable development and appropriate technology and become a natural world leader in this day and age of climate change, our colonized leaders are taking us down the same old path of 'development of mass destruction.'

Nuclear "Power"

Nuclear power in India has always enjoyed official patronage, financial power, and military backing. Now it is also gaining political power. The most dangerous is the trend of the nuclear estate gaining more prominence, power and a forcible say in the country's socioeconomic-political power structures and decision-making processes. Their gaining an upper

hand in the political circles with their autocratic values and tendencies is deleterious to the democratic fabric of our country.

To give just one example, the Land Transfer Act of Meghalaya, introduced in 1972, bars non-tribals from buying or transferring land in that state. Hence the Uranium Corporation of India Ltd. (UCIL) cannot go ahead with Uranium mining activities without clearance from the District Council and the state government. To circumvent this dilemma, the Meghalaya government is being pressurized to exempt the Land Transfer Act from the uranium rich belt in Mawthabah so that UCIL can set up a processing unit there for Uranium mining.[12]

The nuclear estate is getting ready for joint ventures in nuclear energy sector where private companies, both Indian and foreign, could join hands with the Nuclear Power Corporation of India, Ltd. (NPCIL). Secretive efforts are on to rewrite the Indian Atomic Energy Act 1962 in order to facilitate private participation in nuclear activities. This combination of profiteering capitalists, secretive government and careerist scientists and engineers will not auger well for the country.

India's rulers are indulging in this madness of constructing nuclear power plants to provide US corporations, French and Russian companies, and big Indian corporations yet another opportunity to make huge profits. Ever since 1991, when India began the globalization of the Indian economy, India's political parties and big business houses, who are the real rulers of the country, have divorced themselves from the people of the country. For their narrow interests of profit accumulation, they have mortgaged the country's economy to the US-led imperialist powers and their giant corporations. The Indian Prime Minister has already called for private investment in Indian nuclear power generation. This will enable the US nuclear plant suppliers like Westinghouse and General Electric to hawk their nuclear reactors to India. According to newspaper reports, the opening up of this sector in India is likely to provide these corporations a $100 billion business opportunity. Simultaneously, India's big business houses, including the Tatas and Reliance, have also begun preparations for setting up nuclear power plants in the country. India's rulers have sold their souls to the devil for a price that would have shamed Faust!

Kanyakumari Declaration

As a significant step toward addressing some of these important issues, a National Convention on "The Politics of Nuclear Energy and Resistance" was held in Kanyakumari (near the upcoming nuclear power plant at Koodankulam in Tamil Nadu) on June 4-6, 2009. The Convention that founded the "National Coalition of Anti-nuclear Movements (NAAM)" to coordinate the ongoing and upcoming local struggles and to back them up with a vigorous national campaign resolved in the Kanyakumari Declaration, inter alia:

In the context of the unprecedented threats facing the world due to global warming and the rapid depletion of conventional energy sources, the nuclear establishment is most opportunistically pushing nuclear energy as a climate-friendly energy source. However, all the activities associated with nuclear power generation - the mining and processing of uranium, the building of nuclear power stations involving huge amounts of cement and steel, the long construction process, the decommissioning of plants and the handling of radioactive waste - are highly unsafe and expensive, and cause enormous climate-changing pollution. Nuclear energy is not cheap, safe, clean or sustainable. It also does not offer a solution to our energy problems.

It also further observed:

India's nuclear program has been and continues to be vigorously resisted by the people of this country whose struggles in the past have stopped two nuclear power stations - Peringome and Kothamangalam - from coming up. [Similarly, huge public protests by the people of Nalgonda district in Andhra Pradesh stalled a proposed nuclear power plant in 1988 and a proposed Uranium mining project since 2003.] This convention declares total support and solidarity to the struggles of people resisting the Koodankulam Nuclear Power Plant in Tirunelveli district, Tamil Nadu. It also declares support and solidarity to people in all other parts of the country such as Jadugoda, Meghalaya, Haripur

and Jaitapur who are struggling against uranium mining and nuclear power plants.

"*Delhi Rally*"

Given this situation, there is an immediate and urgent need to mobilise public opinion against the reckless nuclearization of the country and to build up resistance on a pan-national scale. In order to do that, all the various anti-nuclear organizations and movements need to come together and put up a united front. In the spirit of the Kanyakumari Declaration and the newly-formed "National Alliance of Anti-nuclear Movements (NAAM)," we must plan some national activities jointly.

It is precisely in this context, we propose to organize a national seminar and a press meet on October 1, 2009 (Thursday) and the "Delhi Rally" on October 2, 2009 (Gandhi Jayanti, Friday) from Rajghat. Since anti-nuclear activists are coming from all over the country to Delhi, we might as well take advantage of this opportunity to hear about their nuclear woes and anti-nuclear struggles, to compare notes with each other, and to chart out national strategies to contain the nuclear menace. Following the seminar, we will organize a press meet in the afternoon to inform the Indian public about the Indian government's dangerous nuclear policies, programs and projects and submit a memorandum to the President of India. The "Delhi Rally" can be a display of our commitment to the common cause and will provide a platform to demand a nuclear-free India that focuses on alternative energy policy, science policy, security policy and so forth.

Gandhi Jayanti is a pertinent day for organizing this program as Mahatma Gandhi epitomizes simplicity, decentralization, social inclusion, and the quest for peace and justice. He maintained that 'if the machinery craze grows in our country, it will become an unhappy land'. Rampant industrialization and reckless nuclearization of the country will certainly make it an unhappy land. Connecting with Gandhi's life, legacy, struggles and messages, the "Delhi Rally" seeks to strive for appropriate technology, sustainable development, energy budgeting, nuclear-free status and environmental redemption for India and humane development for Indians.

Below are some of the plans for the "Delhi Rally" on October 1-2:

[1] We will organize a national seminar on "Nuclear Threats to India's Children and Their Futures" with the presentations of several leading anti-nuclear activists from all over the country.

[2] We will hold a press meet in the afternoon of October 1 to inform the Indian public about the Indian government's dangerous nuclear policies, programs and projects.

[3] A small delegation of NAAM activists will submit a memorandum to the President of India on the evening of October 1, 2009 exhorting her to make India nuclear-free.

[4] The October 2 program will begin with the rallyists gathering and wailing at the Father of Nation's Samadhi about the Indian government's nuclear policies and programs and the bleak future these are going to bring about for us all.

[5] Activists will make a national appeal from Rajghat to all the Gram Sabhas across the country to pass a resolution condemning India's nuclear policies and programs, and demanding the closure of the local nuclear-related projects, both ongoing and upcoming, and send it to relevant authorities.

[6] At 11 AM the activists from across the country will rally to Jantar Mantar carrying a giant piece of (fake) yellow cake, (balloon models of) nuclear power plants, (mock) nuclear waste and (imitation) nuclear weapons to highlight the grave dangers that Uranium mining, nuclear power plants, nuclear waste, and nuclear weapons pose to the Indian public.

[7] These activities will be followed by deliberations by anti-nuclear activists from across the country, songs and dances, exhibitions and celebrations.

No Deals, No Mines, No Reactors, No Dumps, No Bombs!

Don't Nuke Our Children's Futures!! We Say 'NO' to Nuclear!!!

D. Book Review

I. 'Nuclear Weapons: At What Cost?' by Ben Crammer

THE International Peace Bureau, Geneva has brought out a very useful and reader-friendly book, 'Nuclear Weapons: At What Cost?' by Ben Cramer, in July this year.

Author Ben Cramer is a Paris based researcher of the political di mensions of the arms race and a journalist specialised in ecological security and a former Greenpeace nuclear disarmament campaigner.

And the International Peace Bureau is a longstanding global network of over 300 civil society organisations in 70 countries. It won the Nobel Peace Prize in 1910, and over the years 13 of its leaders have been Nobel laureates. Its main programme centres on Sustainable Disarmament for Sustainable Development.

The publication is a part of the IPB campaign captioned as 'Sustainable Disarmament for Sustainable Development'.

As the title suggests, in cogently arranged six chapters, further enriched with six annexure, it deals with the issue of "cost". But just not financial cost that matters. In the Preface, Colin Archer, the Secretary-General of the IPB, puts it pretty laconically: *it is not only the financial cost. There are many other prices to be paid by states (and their populations) once they embark on the path to a nuclear arsenal: damage to the environment, to democracy, to the health of citizens, to international cooperation, and ultimately to our fundamental values.*

The horrific levels of world military expenditure has been pointedly brought out. In 2008 that stood at $1.464 trillion (as per SIPRI's estimates). This is a 6 per cent increase in real terms since 2006. The US expenditure alone on nuclear weapons only in 2008 stood at $52.4 billion. And, nuclear spending per capita worldwide averages $67, with Israel the highest at $215 per head of the population per annum.

The NWS' combined daily spending of $213,300,000 on nuclear weapons is almost as high as the United Nations Environmental Programme's yearly budget of $239 million.

A large of number of maps, photos, diagrams and tables have made the book highly accessible even for a lay reader. It has also provided a wealth of other reading materials including links to websites.

E. Discussion

I. Lunacy at the Time of Radiation: The Tragedy Unfolding in Jadugoda

JOAR

PEACE Now, carried an article titled "Jadugoda Tribals Live under the Shadow of Nuclear Terror" by Tarun Kanti Bose in its Volume 7 : Issue 2, dated June 2009. While it starts out by strongly detailing the ground situation in Jadugoda and the duplicity of the Central and State governments in responding to the needs of the people, it has made some unfounded and rather damaging allegations against JOAR and some people associated with JOAR. We, as members of JOAR, want to set the record straight in this piece.

We value Mr Bose's interest in the issue of Jadugoda, and his attempt in trying to highlight it nationally. However, we are deeply disappointed by his uncalled for remarks against JOAR. While we welcome honest criticism and are happy to engage with questions about

our strategy and our failures, of which we are only too keenly aware, we are taken aback by the personal nature of the attacks in his article.

We are aware of the importance of robust internal critique within any movement, and are open to suggestions for improvement and course correction for our organization. However, the criticisms aired in Mr. Bose's article border on slander; they are not constructive and do not help us move forward.

This is the way the world ends
This is the way the world ends
This is the way the world ends
Not with a bang, but with a whimper

- T.S. Elliot

This is what seems to echo in the minds of people living in and around uranium mines in Jadugoda and surrounding villages. With their land, culture, forests, and future generations in line to be victims of radiation, the requiem for their tragedy is Kafkaesque! Even as the Indian state pushes ahead for further nuclearization, voices of dissent at the grassroots level are not only smothered by the interests of those supporting "clean" nuclear energy, but as it has been found out, even by pretentious NGOs and ambitious stakeholders involved in the making of history.

"Displacement was easy to explain to people. The concept of Radiation was hard to explain. Even when Shibu Soren, then the president of Jharkhand Parishad came to Chatikocha revolt, we could not completely get him to understand the effects of radiation and how it works"

- Ghanshyam Biruli, president of JOAR, talking about the challenges that JOAR faces to this day.

Laying the foundation for State-engineered genocides

Post-independence, the Indian state welcomed its subjects in this state by killing a thousand people when they resisted being a part of Orissa - the Kharsawa police firing took place on January 1, 1948. This was followed by the Mihijam firing in January 1949, by the Bengal police: the reason being that people protested against displacement through the Chittaranjan Locomotive factory. In the 1960s, Jahangir Homi Bhaba, the pioneer of India's nuclear programme sealed the fate of people in Jadugoda when he discovered Uranium.

The state of Jharkhand (then Bihar), is abundant in mineral resources like copper, coal, bauxite, Manganese, Mica, Iron ore and Uranium. Mines that were run by British, became the base for uranium mining. By the early decades of 20th century Tata too had marked his territory, and his band of cronies convinced the indigenous people here that mining was the beacon of their progress.

Thousands and thousands of Jharkhandis(majority were tribals) were pushed into displacement and although a few lucky ones got meagre compensation, the majority ended up in slums, doing whatever manual labour assured them food.

Jadugoda was no stranger to these "development packages" of the state. On one side there was the Tata (in Jamshedpur) and on the other, the government. But Homi Bhaba convinced the people of being inclusive in a way that would make power cheaply available for everyone to enjoy.

Around the 50s and the 60s , the camps aiming for industrialization started arriving. Camps with 'sahebs' who were looking for 'rocks' and 'soil'. And hence the people, out of courtesy and the fealty of hegemony, served the people in these camps with food, water and manual labour.

Since then, the industrialization programme has been carried out in the manner that simply suited the state and completely excluded the people here.

Says Kariya Majhi of Mechua village, "They mentioned some digging and some jobs were promised and to this day things have not changed much. People never have a clue about what is going on in their neighbourhood." He added: "It's a tragedy that not many of us are alive today to give an account of these things."

Thus, what followed independence in this region, were state engineered genocides in the name of development. Thanks to the tendency of genocide denial amongst civilized people, these atrocities are usually not found in

recorded history. This genocidal saga of development thus continues to this day with Nehruvian notions of "development" still followed and celebrated along with a bonus surprise of the free-market. To this day, history repeats, over and over again...

Resistance - the politics of representation

Politically, however, the region was not passive during this time. Tata Nagar has a vibrant history of labour unions, where even political bigwigs like Subhash Chandra Bose, Dr. Rajendra Prasad, Abdul Bari and Jaipal Singh of Jharkhand party had participated. Along with this on the east side of Tatanagar all the way till West Bengal and Orissa, there were several copper mines where all the big trade unions operated. Hence, it would be inappropriate to call Jadugoda - which lies just 25 kilometres away from Tata Nagar - a politically alienated place.

Despite the presence of the ICC Workers Union (Indian Copper Complex Worker Union) and other trade unions, leadership and political power remained in the hands of non-adivasis. One of the members of ICCU even went on to become an MLA from the region

The adivasi and tribal identity were used only as a political card and there were mere Adivasi representatives - this, in a region where adivasis and tribals make up __ of the population.

Even with the CPI-ML backed Indian Federation of Trade Union (IFTU), the representation of adivasis did not improve. This was one and a half decade after the Naxalbari uprising which was a shot in the arm for aggressive left and progressive movements in the eastern region.

The problem of the mainstream political left haunted the movement here as well. There was division amongst the left groups, because some of them were deeply committed to the idea of centralized planning and rapid industrialization, and could not relate to the issues of the adivasis facing displacement. The call for land, water, culture and identity, which were heard all around the world, even then wasn't really grasped by this section of the left. No labour unions, not even those of the Left talked about displacement as they thought of these debates as anti-industry. Hence speaking against radiation was never in the agenda of any left union and this continues to this day.

0"IFTU movement was basically run by Satyanarayan Singh who was an extremist. Actually no trade union took up the cause of radiation simply because none of them were informed or even concerned about it. But then somewhere, there was mention of radiation allowance" says Shamit Carr, who was a student back then and used to be brought to these regions as supporter of IFTU for protests and dharnas.

Charan Murmu, a Pargana (traditional leader) says, "If at all there was to be knowledge about radiation and its hazards on local population around that time, the uproar against UCIl would have started much earlier," says Charan Murmu. Murmu was a worker in Rakha Copper Mine and member of ICCU and today, is one of the leaders in JOAR (Jharkhandi Organization Against Radiation).

And hence, disillusioned with the left, during the early 70s adivasi movements, comprising youth, started taking shape under the aegis of organizations like JMM (Jharkhand Mukti Morcha) and AJSU (All Jharkhand Students' Union). Major events unfolded in the Singhbhum region, which went on to become the stronghold of the AJSU and JMM of Jharkhandi identity politics.

AJSU quickly became the political voice of adivasi youths and started taking up issues of displacement, compensation and even issue related with radiation with boldness. Even in AJSU radiation and related uranium mining issues were not in the main agenda due to which, Ghanshaym Biruli and others started the Jharkhand Adivasi Visthapit Berojgar Sangh (JAVBS) to fight for the tribal land rights/ compensation/ jobs.

The events of 27 January 1996 were a milestone for several reasons. On that day, thirty houses were bulldozed in Chatikocha for the construction of the third tailing Dam. This pushed people's tolerance and they began the struggle for their rights. Although talking against

radiation was considered "anti-national" activity at the time, the JAVBS managed to force UCIL to fulfil the demands of the people.

During this struggle they realized the brutal reality related to radiation. The then leaders also realized that job compensation would only be the temporary demand, as there was a huge and never ending danger they were facing.

The greater realization of the effects of radiation, however resulted in great anxiety and demanded a much more organized movement. Hence, Ghanshyam Biruli and other members of AJSU, started Jharkhandi Organisation Against Radiation - JOAR - on February 14, 1998 contrary to the article's claims that he started JOAR in 1991. Since its inception JOAR - based in Jadugoda - has reached far off places like Turamdih and Baghjanata that are 25-40 K.M. Away.

The uranium mine in Turamdih was closed down around 1985 as the ore percentage was very low. The scores of people who lost their land to this mine got no compensation, and the land was further degraded making it a place devoid of any employment opportunity.

In 1998 after the second atomic test, Indian nuclear program required the procurement of indigenous uranium and that had to come from Jadugoda. The government had plans of not only opening the closed mine in Turamdih, but also opening a new mine at Banduhurang.

Consequently in 2004 UCIL announced a public hearing for that new mine. Here people's opinion was divided as a large number of people wanted the new mine so that there would be employment opportunities, but a good number of people were against with the project also. (This is the 'Jan Sunwayi' mentioned on Page 54 of Mr Bose's article)

JOAR was working there with Banduhurang village head Magilal Padya as head for that area. He was facing immense pressure from UCIL, the local administration, and local political parties. He was charged with false cases and had even escaped an attempt on his life. The public hearing was banal - the big tent filled with UCIL workers. A huge number of police were brought, the villages were there as expatiators with a good number of youth and displaced people from Turamdigh.

Ms. Sunita Dubey from HNRL(Human Rights Law Network) New Delhi, came to the hearing and talk about legal issues. The Environment Impact Assessment and Environment Management Plan reports were unavailable to those whom it mattered the most. Only the Executive Summary was distributed just a few days ahead of the hearing.

JOAR president Ghanshyam Biruli said that hearing: "We are illiterate uneducated people we don't know much about radiation and its effect but our experience in Jadugoda tells us that uranium mining has created a lot of health problems and our life is worse." That public hearing also saw people expressing their absurd situation. They said: "We will die later with Alpha, Beta, Gama, but we are dying every day of hunger."

JOAR has NEVER supported UCIL as Shamit Carr claims. As for JOAR's alleged support at the Banduhurang 'Jan Sunwai', JOAR has video evidence to substantiate that it has not supported UCIL. Shamit Carr himself has admitted that he was falsely quoted as saying, "JOAR supported UCIL and BIRSA opposed UCIL" (P.No.54)

At the public hearing in Baghjanta (40 k.m away from Jadugoda) on Sep. 18, 2004, a similar kind of drama unfolded. This area is very remote, surrounded by forests and badly connected. It is also the battlefield of government supported anti-naxal groups and the ultra-left. Here too, JOAR along with Ms. Bedoshruti Sadhukhan Environmental Justice Initiative, New Delhi

and Bibhut pd. Tripathi (Bhubaneshwar) - a Supreme court lawyer - was present and under police guard all the members were asked to leave the campus of the hearing. It is important to note that no members of BIRSA, MM&P, or JMACC were present at that hearing.

This was the time when JOAR was taking up the issue of radiation at a national and

international level. JOAR members visited international conferences and put Jadugoda in the ranks of international anti-nuke movements. Also, JOAR was able to successfully group with WSF Mumbai, and other anti-uranium mining organizations including two members of these organizations from Meghalaya and Andhra Pradesh and go to Japan to raise the mining issue in the nuclear debate.

Here, it is appropriate to mention that even in the anti-nuke movements indigenous people's voices were always cornered even though majority of uranium mining is happening in tribal land. Even as intellectuals/activists debate on whether nuclear energy is safe or not, or discuss the atom bomb as a deterrent to US imperialism, it is shocking that no one talks about the plight of the communities who are suffering uranium mining.

JOAR requested HNRL, Delhi to publish in Hindi and English, two important posters on the effects of uranium on health and environment, and books on uranium and radioactivity.

Meanwhile, in Jadugoda, UCIL employed a different strategy. They spread malicious propaganda saying that JOAR is anti-national, about the involvement of a foreign hand etc. Even after the film 'Budhha Weeps in Jadugoda', posters, booklets thrown at them, instead of answering the questions they were resorting to targeting individuals in JOAR.

JOAR silently worked on more scientific data and research, and brought out the first health study done on Jadugoda by Dr. Sanghamitra and Surendra Gadekar. JOAR members approached Professor Hiroaki Koide from the Research Reactor Institute, Kyoto University, Japan. The radiobiological study he did was a major milestone as it was the first time an independent study exposed naked truths about heinous crimesof UCIL /Department of Atomic Energy.

Also around the same time, with the help of journalists from Ranchi, the Environmental Committee of Bihar legislative Council with Pr. Jabir Hushen as chairperson, and headed by Goutam Sagar Rana, visited Jadugoda. They presented a picture of the very hard realities of mining impact in and around Jadugoda.

During 2001-02 some anti-nuke groups from Japan visited Jadugoda many times and showed solidarity for JOAR's struggle. They helped us to set up a rehabilitation centre for the disabled children of Jadugoda. JOAR had acquired land 12 km away from Jadugoda and involved the villagers in the task. Some foundation work was done, and a borewell was dug. Unfortunately some incidents happened - a few loads of bricks were stolen from the site and it happened for a while. Then JOAR realized that the villagers did not perceive this project as their own, but felt that it was some charitable work done by outsiders. JOAR too realized that running a rehabilitation centre is not an easy job. We need doctors and nurses who can give those children specialised care. Plus, a real fear was that families with disabled children would place the complete lifetime responsibility of their children on the 'charitable hospital'. The simple rationale for this possibility is the gut-wrenching poverty that exists in these areas. But JOAR does hope that in the future it will be able to start this work in this direction.

JOAR lead the movement against uranium mining inside India and went to Nalagonda (Hyderabad, Andhra Pradesh), Cudappa (Rayalseema)2006, MAUP/ Shillong, to support movements against uranium mining. JOAR also participated in various anti-nuke programmes organized by Coalition for Nuclear Disarmament and Peace (CNDP) in Delhi.

JOAR's efforts have been recognized not only in India, but also internationally. JOAR was selected for the prestigious Nuclear Free Future Award-2005, which was given in the Jaipur conference of the CNDP. The following year, we participated in World Indigenous Uranium Submit in New Mexico-Arizona.

In April 2006 JOAR participated in the International Physicians for Prevention of Nuclear War conference (IPPNW) in Bonne. Here leaders of JOAR met John Lutarze, who along with its India

chapter, India Doctors for Peace and Development, carried out a very important health survey whose results and Video - Jadugoda- The Black Magic - (http://www.youtube.com/watch?v=eIOmavVcG3M) were presented in the Royal School of Medicine, London.

Meanwhile, between 2006 and 2007, tailing pipes burst three times. JOAR effectively campaigned against this and made it an issue to be reckoned with. Many organizations joined to send petitions.

One of the major victories of JOAR came in Mahuldih public hearing on 29.August 2005. In Mahuldih the situation was contrary to our regular experiences. For a change, UCIL and State Pollution Board officials were forced to leave the hearing. Two comrades from Nagpur Mr. Prakash Meghe and Mr. Aravind Ghosh were present in that hearing.

But the initial victory was not indicative of things to come. In a major setback, one of the leaders of JOAR from that village asked the central leadership of JOAR to stay away from the issue assured management of handling the issue by themselves. In the absence of the central leadership, this man from Mahuldih was arrested. The movement in Mahuldih was suddenly leaderless and lost its direction.

On the other hand UCIL went ahead with the local JMM-MLA, and organized the Repeat Hearing two km away from Mahuldih village near the MLA's house with hired goons and heavy police presence. (Video on YouTube - http://www.youtube.com/watch?v=FxhBs86q_hY&feature=related)

After Chatikocha struggle ,1996, JOAR spread over an almost 50 sq. kms area around UCIL's operations. But this also made JOAR vulnerable, and with excess pressure, the members found it difficult to face diverse situations. JOAR is perceived as an enemy by various political parties near to Tata Nagar(including Jharkhandi party also) that have a strong presence in those areas. These parties are also apprehensive about JOAR's growing popularity.

As JOAR gained popularity, it also faced increasing challenges. Some core JOAR members faced tremendous pressure of threats or inducements and could not continue to function. As word about JOAR spread, many new volunteers joined in, but were temporary only, putting great strain on the functioning of JOAR. These pressures are not new or unique to JOAR, but are faced by all groups that have attained a certain measure of success.

Hurdles/ successes

With Jharkhand Navnirman Abhiyaan, more than 20 organizations joined together and demanded cleaning of the waste emitted in and long term development of the area in 2005-06. The aim has been to make the company more responsible and answerable to people. But JOAR has not been achieved this because the company divided the people on the pretext of distributing money allotted for development, between adverse groups. Instead of bringing development which created job opportunities, the company resorted to small namesake constructions like lampposts, urinals etc.

We failed to control these happenings. To this day JOAR has not been able to push the UCIL to open a permanent clinic to examine the local people apart from its workers. Even after having comprehensive scientific surveys and studies on JOAR's side, it has not been able to create enough pressure on UCIL to carry out independent or unbiased studies on the effects of radiation on people's health. JOAR has often failed to get/give big relief to the victim's families.

The "experts" and the institutions appointed by UCIL who did conduct studies carried out the task by staying in UCIL bungalows. The reports have never been accessible to people.

JOAR has carried out a fierce battle with UCIL for a long time, and it continues to do so. The members braved great hazards and threats from UCIL and several other vested interests.

Clarifications

Even as JOAR fights a daily battle against UCIL, with financial constraints and other difficulties, it is extremely sad

that members of JOAR are having to reply to unfounded allegations.

Some of the clarifications that JOAR needs to give in response to Mr Tarun Kanti Bose's article are as follows:

* Ghanshyam Biruli and other AJSU members started JOAR on the February 14, 1998 contrary to Xavier Dias' claims that he started JOAR in 1991. But it is true that Xavier was a part of JOAR for some time. Photographs of that event are available in the JOAR office. Activists from other organizations (i.e. Kapur Bagi, Amar Sengal) also attended that meeting .

* In 1989, Ghanshyam Biruli and Hariram Murmu had gone to meet Father Mathew in Chaibasa, they met Xavier for the first time in Jadugoda. This was in 1989 and proves that Xavier was not a part of any movement in 1979 as he claims to be in the article. (P.No.50)
* JOAR was preceded by Jharkhand Adivasi Berojgar Visthapit Sangh (JABVS) or the Jharkhand Tribal Unemployed Displaced Committee. It was set up on June 5, 1995 and not in 1989 as the article claims. (P.No.50).
* Sukumar Murmu is a fictitious Character. Durga Prasad Murmu is the Chairman of Talsa Village Assembly. This discredits "Sukumar Murmu's' allegations that "Ghanshyam Biruli is acting like a broker of UCIL" (Pg 54). And the village Barakata is 20-25 km away from Talsa village. (P.No.54)
* The name of former working president of UCIL Kamgar Union has been mistaken as M.M.Bhagat. It is N.N.Bhagat. (P.No.48)
* The first notice for land acquisition in Chatikocha was issued in 1989, and not in 1985 as the article claims. The bulldozing of homes started on 26 January 1996. (P.No.51).
* JOAR has never supported UCIL as Shamit Carr claims. As for report's claim that JOAR supported UCIL at the 'Jan Sunwai' in February 2004, JOAR has video evidence to negate this. Shamit Carr himself has admitted that he was falsely quoted as saying, "JOAR supported UCIL and BIRSA opposed UCIL" (P.No.54)
(recorded evidence available)
* There are No 17 tribal organizations in Banduhurang as Shamit Carr claims in the article.(P.No.54)
* As for allegations on Ghanshyam's income and wealth; Ghanshyam was adopted by his uncle. Both his father and his uncle died of lung cancer. Both of them were employed in UCIL. Hence whatever the ancestral property there was came to Ghanshyam. After PESA (Panchayatraj Extension to schedule area Act- 1996) Ghanshyam got good amount of royalty for his land. In fact stone, quarry operations are still going on his uncle's land.
* The pond in front of Ghanshyam's house is owned by Buddhia Munda and was not dug by Ghanshyam as the article claims.
* The assumption that adivasis cannot be prosperous stems from the same old caste and class prejudices many of us hold. These questions probably would not have been raised if it was an upper-caste person in the place of Ghanshyam. (P.No.54)
* Tarun Bose has not spoken to either Ghanshyam or Dumka Murmu in the last 6 years, but they have been quoted nonetheless. The last time he spoke to even Shamit Carr was in 2004. The quotes have been used as per the writer's convenience.(P.No48, 50, 52, 54, 59)
* JOAR is disappointed that of all the people available in Jadugoda, Tarun Kanti Bose has based his entire article on either false testimonies, or those from this one person Surai Hansda. Surai Hansda is welcome to his opinions about JOAR, but Mr Bose, as a responsible journalist should have at least talked to more people and quoted them accurately, or given JOAR the opportunity to answer the

criticism. Mr. Bose's article flouts all norms of responsible journalism.

"These letters issued on the internet is out of our area of politics or even interest. We are rightly placed in our land and we work on the ground level. We do not believe in ranting on the internet and neither do we need certificates from those people on the internet. Let them come and work here instead of attempting to defame and demoralizing us on the internet" adds Charan Murmu, a paragana (traditional community leader) and one of the elderly leaders of JOAR.

Comments on criticisms

Besides the clarifications that JOAR has put forward, it is open about the criticisms levelled against the way it functions. The article pointed out some right criticism, but with bad intent perhaps.

As per allegations about change in strategy of JOAR goes, this is what JOAR collectively believes: "To demand better jobs and better working conditions in UCIL for people displaced because of UCIL is a sign of helplessness of JOAR. JOAR deals directly and personally with harsh realities of people living in Jadugoda and near-by villages."

With regard to the alleged rifts in JOAR Tikaram Soren said, "The people who found work in UCIL, for reasons of helplessness stopped participating in the activities of JOAR. Otherwise everyone is still there."

Responding to allegations of leaders being from middle-class and their inability to "declass" themselves, Dumka Murmu said "UCIL has impoverished the people here. They have displaced and destroyed the agricultural lands of adivasis here. Those adivasis who haven't been displaced or affected by UCIL are not poor. They have enough food on the table for subsistence."

"These are our new enemies. Till now we used to believe that only CRPF, CISF personnel, Forest guards and lobbying politicians were our enemies working against our interests and alienating us from our livelihoods. But these people are more dangerous," Mr. Murmu added.

As for allegations of uniformity point out to the challenge he added, "We cannot carry out people's movement at the time of agriculture. Our livelihoods are dependent on agriculture. In carrying out the movement we cannot forget our everyday realities."

JOAR's course of action

Our response to the judgements pronounced by the article on JOAR's approach, work and the methods adopted to sustain the movement against uranium mining is as follows:

JOAR is uncompromising in its opposition to the setting up of new uranium mines as it deals directly and personally with the harsh realities of people living in Jadugoda and near-by villages. Yet, due to helplessness, JOAR is forced to demand better jobs and better working conditions in UCIL for people displaced because of the existing mines.

To prevent new mines from being set up, JOAR constantly works with various groups of people to create public opinion, through awareness of the effects of radiation on the people of Jadugoda and surrounding villages.

It works with the elders of communities at the grassroots, and meets Majhis and Parganas (traditional heads of tribal communities), on a constant basis to keep the movement going.

Simultaneously, it carries out awareness programmes to communicate the effects of radiation to educated people so that the information disseminates. It also tries to reach schools through these programmes.

"Displacement was easy to explain to people. The concept of Radiation was hard to explain. Even when Shibu Soren, then the president of Jharkhand Parishad came to Chatikocha revolt, we could not completely get him to understand the effects of radiation and how it works" says Ghanshyam Biruli, president of JOAR, talking about the challenges that JOAR faces to this day.

"Even when Xavier or (Shri) Prakash were not here, the andolan was there. Our society and our families are at risk here. And fighting is the only option

for our survival. We may not get immediate results, but it is not that we depend solely on support groups. We take help from them in terms of experience.

"In fact even when we went to Navajo nations in United States of America, we did not bring back dollars. We just learnt from their experiences from fellow tribal communities of USA. And with this we'll fight. We'll fight for our lands at any cost," says Charan Murmu, expressing great anguish.

Achievements

JOAR's achievements and level of success may not seem much. But amidst the gruesomeness of the reality unleashed by UCIL in Jadugoda, there are small but extremely crucial measures that we have forced UCIL to take. Some of them are:

1) Getting UCIL to fence tailing dams. Earlier, tailing dams used to be open grounds and people oblivious of its risks would play, graze their cattle, fetch firewood, roam around and even fetch water. Now these dams are fenced and are guarded by private security personnel who replaced CISF personnel. These security personnel are usually hired on a temporary basis so that the company does not have to bare the health costs of these personnel.
2) Getting UCIL to cover open trucks used to carry ores. Earlier ores and mill tailing used to be carried in open trucks. Today, UCIL covers the ores with Tapeline sheets that are usually torn anyway. Earlier when Ore used to fall off from the trucks, nobody used to bother even if entire truck load of ore used to fall on the road or agricultural fields. But today it's cleaned instantly. The last time being, August 1 this year, when a truck fell into an agricultural field and the ore spilled. It was cleaned within a matter of five hours in the middle of the night.
3) Earlier Mine tailing was given to people to build their houses, roads, boundaries, and compound walls. Today that practice has been stopped. In front of Narua Pahad mines, a small hillock has been made out of mine tailing. It used to be open and the residual water used to join Gurra river, which is a tributary of Suvarn Rekha river. But today there's a cover of soil on top of that hillock and a lining has been constructed to stop the flow of water into the river.
4) Earlier miners used to bring home their clothes and women used to wash them. They don't anymore. Miners today are asking questions pertaining to safety levels, whereas earlier it was not even an option in the minds of workers. Even if it is on a low-pitch questions are raised nonetheless and once workers retire from their jobs they usually support JOAR.
5) Before the tailing pipe burst, till around 2006-07, water used by people used to be ground water or surface water. But after the disaster the company took the responsibility of providing pipe water.

Public hearing in May 2009

In recent past, the organization has been passing through hurdle after hurdle. The May 2009 UCIL Campus Public Hearing was a complete farce. The public hearing in question was held inside the UCIL campus next to the camp of Central Industrial Security Force.

Section 144 was 'declared' in the area, and was imposed only against those suspected to be critical of UCIL's plans. The stated atmosphere of terror was engineered to create a fear-psychosis among the local population.

Employees of UCIL and its supporters were brought in by buses in large numbers, while those suspected to be critical of UCIL were terrorized by police and paramilitary forces. The entire hall in which the public hearing was held was occupied by UCIL employees and those who claim to support UCIL. Many others such as us were prevented from entering the hall and were forced out by the employees of UCIL (with help from police). Left with no other choice JOAR had to boycott the

public hearing and people sat on a dharna outside the premises.

Consequently, JOAR wrote a letter to the Environment Minister Jairam Ramesh with following demands:

(1) The public hearing of 26 May 2009 be annulled and a new hearing be held in a place that allows free and fair participation of the people.
(2) UCIL be ordered to prepare credible EIA and EMP reports
(3) A moratorium be declared on opening new uranium mines and that International rules and standards be followed in existing mines
(4) An independent and credible study be held with regard to health and radiation problems in Jadugoda
(5) Those suffering from radiation be adequately compensated and laws such as those formulated in USA (viz., Radiation Exposure Compensation Act (RECA) and Energy Employee Occupational Illness Compensation Program Act 2000 of U.S.A) be implemented
(6) The health of the people and environment be monitored regularly
(7) UCIL be made responsible for the development of the villages located in the vicinity of the mines
(8) People displaced by the mines and those whose lands were taken over by UCIL be compensated and employed by the company

Post 123 agreement, Jadugoda mines have become 'Strategically important' to the Indian state. This has made it extremely tough for JOAR, especially at a time when their morale has been taking a constant beating. But then, struggle has been a way of life for adivasis and their spirits cannot be broken; history is a witness to this fact. Hence, we at JOAR are not going to stop our struggle at any cost, in fact it is time we intensified it. Even though, we are disappointed with Peace Now for publishing Tarun Kanti Bose's article without checking the authenticity of the statements it made, we do expect assistance and support from CNDP in the future. We need greater assistance from scientists, doctors, media and the civil society as the issue demands an all-out effort from everyone, especially with solid scientific factual approach.

We welcome whatever help comes our way, as long as it suits us ideologically. Even though for now we are at our wits end, we still have hopes of a radiation-free tomorrow for the coming generation.

Our rhetoric though, is not about JOAR. It is about the wretched human beings with their human bodies whose cries do not find any place in the larger noise about security, nationalism, jingoism, deterrence and so on. The sobs of mothers with deformed babies or babies who just could not make it, of women who have been dumped by their in-laws because of their infertility and of those people for whom cancer and tuberculosis has become an everyday reality get registered absolutely nowhere, as it seems.

Otherwise, comments like the one which came from S K Malhotra, Head, Publicity Division, Department of Atomic Energy (DAE) on mining in Jadugoda would have been a bit more closer to sanity.

He said: "The ores mined at three mines - Jaduguda, Bhatin and Narwapahar - are of very low grade (uranium content 0.06%) as compared to those available in other countries. The congenital malformations occur the world over and the ocurrence is known to be due to several factors such as maternal age, consanguinity, ethnicity, nutritional status etc." (http://www.scribd.com/doc/2605958/Radiation-hazards-at-Jaduguda-and-Kerala)

A health study by Indian Doctors for Peace and Development (IDPD) paints a very terrifying reality of people's health in Jadugoda. Here are some basic findings:

1. Congenital Deformities

The investigation shows that babies whose mothers lived near uranium mining operations areas suffered a significant increase in congenital deformities. While 4.49% mothers living in the study villages reported that children with congenital deformities were born to them,

only 2.49% mothers in reference villages fell under this category.

2. Primary Sterility

For the study purpose, the criteria of primary sterility were laid down to be a married couple not having conceived for at least three years after the marriage, and not using any method of contraception. The result shows that while 9.60% of couples in study villages have not conceived even after three years of marriage, only 6.27% of couples from reference villages fell under this category. The finding demonstrates that couples living near uranium mining operational area are approximately 1.58 times (odds 1.58) more vulnerable to primary sterility

3. Cancer

On being asked the cause of the last death in the household, 2.87% households in study villages attributed the cause of death to be cancer, whereas, 1.89% households in reference village fell under this category.

The study reveals that the cancer as a cause of death among people living near uranium mining operational area is significantly high.

4. Life Expectancy

The study shows that increased numbers of people living near uranium mining operational area are dying before completing 62 years of age (the average life expectancy in the state of Jharkhand is 62 years).

The study shows that 68.33% the of deaths in the study villages were happening before attaining 62 years of age, whereas 53.94% deaths were reported in reference villages under this category. The findings are discerning and the difference is significant.

Other variables

The study tried to look at few other health variables as well, such as the prevalence of spontaneous abortion among married women, still births and chronic lung diseases. The prevalence of all these health variables was definitely more in the study villages as compared to reference villages.

When poverty, unemployment, hunger and Radiation get linked with terms like nationalism, aggression from neighbouring nations, imperialism, clean and safe power generation from a distance, it all seems like a bunch of lunatics pulling different threads of a rope at the height of their lunacy. That is the tragedy of Jadugoda, we have too much talking going on, too isolated from sanity.

Note: In our last issue the article referred above carries some unsubstantiated allegations against the JOAR, which is a constituent of the CNDP. The editorial team clarifies that those portions should have had been excised. The inadvertent oversight is regretted.

Membership Form

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

Name:

Organisation:

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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

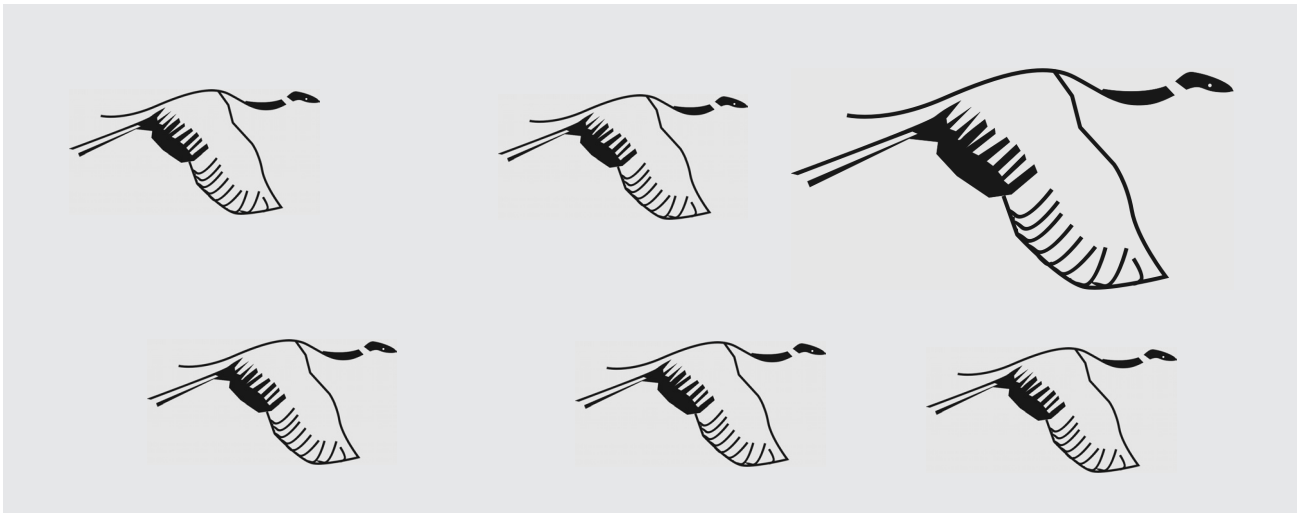
CNDP

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 is 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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