

Peace Now!



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EDITORIAL

“Russian President Vladimir Putin was [the] guest of honour at India’s Republic Day parade, showing warm ties still exist between the former Cold War allies despite New Delhi’s growing US tilt.” is the text of a news capsule put out on the net by a leading international news agency under the caption, ‘Putin guest of honour as India rolls out military might’ describing the Russian president’s recent visit to India and linking it to the main report.

The implications, and lessons, of this visit, apart from those seen and perceived in terms of international big power rivalries as is the wont of the run of the mill ‘security and strategic analysts’ – amply illustrated in the above example,

are important from the viewpoints of the anti-nuke peace activists as well.

The visit has shown up in graphic details the divergence and also convergence between the Russian and US interests, particularly on the issue of the ongoing Indo-US Nuke ‘Deal’.

That Russia has, on this occasion, signed an MoU with India as regards supply of four additional nuclear reactors in future for the Koodankulam nuclear power plant in Tamil Nadu has been rather convincingly interpreted as an attempt on its part to preempt American moves to sell their wares and corner the Indian market, as and when and if at all the ‘deal’ eventually comes through. The fact that only the other day Russia (Atomstroieexport), and France (Areva), had

been pipped to the post by the US-based corporate Westinghouse, now a subsidiary of Japanese Toshiba, in the race to secure a giant deal to supply four nuclear reactors to friendly China with an estimated price tag of \$5 to \$8 billion must have had made Putin all the more desperate.

Rather paradoxically, but quite self-evidently, this desperation has also impelled Putin to demonstratively commit himself to garnering support for the American initiative to change the ground rules of the 45-member Nuclear Suppliers Group (NSG) to accommodate the Indo-US Deal in the making.

Here it would be pertinent to recall that the US President George Bush has inked the Henry J. Hyde Act on the December 18 last, as the first major step, towards actualising the Indo-US Nuke Deal, which had been outlined in the Bush-Singh joint statement issued on July 18 2005 at Washington DC and further developed and reiterated on March 2 in the joint statement issued from Delhi.

The ‘Deal’, as when becomes operative, will enable India to have ‘civilian’ nuclear trade with the US, and also the rest of the world, having been conferred the quasi-legitimate status of a nuclear weapons state.

As of now India as a non-signatory to the Nuclear Non-Proliferation Treaty (NPT) is not entitled to such facility and was

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specifically debarred since May 1974, when the first Pokhran test was carried out.

The barrier was progressively raised and reinforced, and more so since May 1998, when with another five tests carried out India virtually gatecrashed into the exclusive club of nuclear weapons states, albeit with a pariah status.

A couple of hurdles, however, remain to be crossed.

As far as the US is concerned, it will have to conclude a treaty with India, popularly termed as the '123 Agreement' laying down the specific terms and scope of cooperation between the two countries along with the specific safeguards ensuring strict separation between the 'civilian' and 'strategic' plants being properly codified. India will also have to negotiate and finalise the scope and terms of inspection by the International Atomic Energy Agency (IAEA) as regards the plants designated as 'civilian'. Then the whole package will go to the NSG for its consensual approval. After crossing this hurdle it will be again presented to both the houses of the (reconfigured) US Congress. On its approval, the President will be authorised to act upon it and the 'Deal' will finally come into operation.

A very interesting aspect, which has, rather surprisingly, not attracted the attention of the media as yet, is that in the event of the 'Deal' passing through the NSG barrier but floundering at the US Congress, for whatever reasons, the other 44 members of the NSG would be able to have nuclear commerce with India as per its amended rules, but the US will not.

It is precisely this scenario

the Russian, French, Canadian players must at times be just fantasising about.

Those who were trying to block or at least making a show of opposing the 'Deal' exclusively in terms of loss of India's national sovereignty cannot but be highly discomfited by the outcome the visit. That the Indo-Pak-Iranian gas deal has made a bit of headway despite explicit American opposition and while India is likely go on an armament shopping spree from diverse sources in the coming days - a joint military exercise is scheduled to take place in Russia, in the northwestern Pskov region, later in September this year will further underscore the essential untenability of such opposition.

Be that as it may, Putin's visit with its promise of a string new nuclear power plants on the 'Deal' crossing the NSG hurdle has also clearly brought out how in this present case the 'energy' and 'weapon' dimensions of the nuclear issue are intimately intertwined.

Apart from other negative impacts in terms of increased strategic proximity between India and the US and also heightened nuclear danger to the South Asian region and the world as a whole through the undermining of the current non-proliferation order and moves towards global nuclear disarmament, freer access to nuclear fuel and technology will also trigger a mad race for building nuclear power plants in the country, as has been exemplified by Putin's promise.

Given the fact that nuclear power is as of now fairly uneconomic, capital-intensive and thereby cost frontloaded, intrinsically hazardous - from

mining to power plant operations, potentially catastrophic, acts as a major driver and facilitator for manufacturing nuclear warheads, will crowd out investments and efforts for ecologically benign alternate energy and there is as yet no failsafe method of disposing nuclear waste and the old outlived plants, the consequences would be nothing short of disastrous.

In this issue we have highlighted the fact that hands on the famous "Doomsday Clock" of the Bulletin of the Atomic Scientists (BAS) have been moved forward from seven to five minutes before midnight and explained its spinechilling implications. Then the implications of the Putin's trip to India have been dealt with in some details. We have also examined the various aspects of nuclear power given the radically heightened relevance of the issue. The likely deleterious impacts of the Chinese testing of an anti-satellite missile, a part of militarising the outer space, have been deeply looked into. We have also covered the local struggles here - in Haripur, West Bengal, and the real life dangers of nuclear power production in Jadugoda, Jharkhand. We have as usual presented a short briefing of the CNDP activities in public in the intervening period since the last issue. And finally some documents for reference of the more serious students and also the lay readers and activists.

It is worth a special mention that we have carried an article from a leading figure of the Palestinian struggles reporting from the barricade, so to say, on the latest challenges being encountered.

If The Atomic Clock Strikes Twelve – Midnight Is Forever

Douglas Mattern

*But thoughts, the slaves of life, and life, time's fool,
And time, that takes survey of all the world,
Time must have a stop.”*
- Henry IV, Shakespeare

We cannot stop or slow the space/time/continuum that permeates our world and the universe, but we must, if we really care about the future and destiny of humanity, stop the time of human folly that is leading toward a black abyss. This was underscored this month when the hands on the famous “Doomsday Clock” of the Bulletin of the Atomic Scientists (BAS) was moved forward from seven to five minutes before midnight.

The reason is manifold, including, as reported BAS, a “renewed emphasis on the military utility of nuclear weapons...and the failure to adequately secure nuclear materials.” An increasing danger is the proliferation of nuclear weapons states, now numbering eight or nine, along with the prospect of others joining this macabre club in the near future. The United Nations reports that over 30 countries have the capability to produce nuclear weapons.

In 1963, President Kennedy emphasized the extreme danger of nuclear proliferation: “I ask you to stop and think for a moment what it would mean to have nuclear weapons in so many hands, in the hands of countries large and small, stable and unstable, responsible and irresponsible,

scattered throughout the world. There would be no rest for anyone then, no stability, no real security, and no chance of effective disarmament. There would only be the increased chance of accidental war.”

What is difficult to understand is that after the severe danger of nuclear war during the long decades of the Cold War, are still only 30-minutes or less from nuclear incineration. The reason is that included among the 27,000 nuclear weapons stockpiled in the world, thousands of U.S. and Russian strategic nuclear warheads are on hair-trigger alert. The RAND Corporation reports these weapons could be launched in a few minutes notice destroying both countries in an hour. Such a doomsday scenario could result from an accidental missile launch, an early warning system error, or miscalculation.

Why are these genocidal weapons on hair-trigger with the daily treat they pose to civilization? It would surely appear to any outside observer to be utter madness. This brings to mind the famous statement by the Greek playwright, Euripides (480-406 BC) after contemplating the senseless human slaughter in the Trojan War: “Whom the gods would destroy, they first make mad.”

Perhaps ignoring a civilization ending threat year-after-year for decades is a kind of madness. But madness or just incredibly irresponsible, we must wake up and reverse direction before it is forever too late. This danger cannot be overstated. Shortly before leaving office, former United Nations Secretary General, Kofi Annan, stated that among all our serious global problems, nuclear weapons present the greatest danger because they present a “unique existential threat to all humanity.”

In this first month of the seventh year into the new millennium, the great scientist and fellow of the Royal Society, Steven Hawking, stated: “As scientists, we understand the dangers of nuclear weapons and their devastating effects...as citizens of the world, we have a duty to alert the public to the unnecessary risks that we live with every day, and to the perils we foresee if governments and societies do not take action to render nuclear weapons obsolete...”

Sir Martin Rees, president of the Royal Society, professor of cosmology and astrophysics, and master of Trinity College at the University of Cambridge, stated in response to the advancing the nuclear clock: “Nuclear weapons still pose the

most catastrophic and immediate threat to humanity...”

Stephen Hawking and Sir Martin Rees both agree that climate change could threaten our civilization, but it is nuclear weapons that are the greatest and immediate threat. It is, therefore, imperative that we join together with an unyielding

determination and with an iron will to ensure that nuclear weapons are abolished from the face of the earth. Until then, humanity will remain, as President Kennedy stated: “Under a nuclear sword of Damocles, hanging by the slenderest of threads, capable of being cut at any moment by accident or miscalculation or

madness.”

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[Source: <http://www.scoop.co.nz/stories/HL0701/S00363.htm>]

Putin’s pragmatism arms India

Neena Gopal

If there was one thing that emerged from Russian President Vladimir Putin’s two-day visit to Delhi, it was this - that India’s quest for nuclear arms has, not one, but two godfathers.

And that the United States and Putin’s Russia may be going head to head over who controls Moscow’s former satellite states in energy-rich Central Asia, and for that matter even Russia’s own vast oil and gas reserves, with the bitter battle over privatising Russian energy giant Gazprom being the prime example.

Indeed, the United States may be doing as much if not more to win over the former Soviet Union’s biggest prize in Asia - India - whereas the startlingly candid Mitrokhin Files showed the KGB had a bigger reach in the South Asian nation, which was its Cold War ally for nearly 30 years, than any other intelligence agency thus far.

US Secretary of State Condoleezza Rice, the Soviet expert, may not have a handle on the Middle East, but she does get India.

In a curious confluence of policy if not interests therefore, the bid to boost India’s “advanced nuclear technologies” - a.k.a atomic

strategic assets as the Soviet Union crumbled, and steadily rebuilt his truncated country until it is back in the high stakes game of international diplomacy as a player, diminished but not to be dismissed.

India is archetypical of Putin’s pragmatism. From Indian Prime Minister Manmohan Singh’s point of view, the power play over his country dovetails with his efforts to secure India’s energy interests.

It offers Russian support at the Nuclear Suppliers Group, when the 45 nation body meets this summer to decide on whether to back India’s civilian nuclear energy needs which require an uninterrupted supply of nuclear fuel, the right to reprocess spent fuel, the import of dual use technology to building new nuclear reactors.

In today’s changed international scenario Russia could not ensure any of the above until the United States changed the nuclear non-proliferation regime in favour of India.

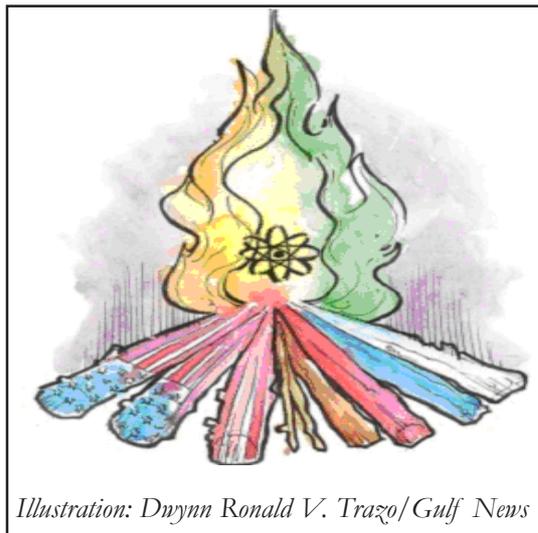


Illustration: Dwyann Ronald V. Trazo/Gulf News

weapons - is an unambiguously joint Russo-American enterprise.

High stakes game

Caught in a time warp, the members of this ‘jihad’ club still see politics riven along sectarian lines, unable to see the globalised world has moved on making such divisions increasingly obsolete.

Putin’s Russia may not be the same as his brutish muscle flexing mentors. But the gritty leader has stood fast against US attempts to take control of

But it suited Russia to wait until the United States and India made peace over Delhi's nuclear ambitions, until it offered the nuclear technology that India must buy into, to take it to the next level.

On India's nuclear assets therefore, Moscow and Washington are on the same page. On other areas of strategic co-operation, the race to fill the void is on.

Billion-dollar arms contracts are up for grabs for a slew of armoury from fighter aircraft, cruise missiles, tanks, aircraft carriers and helicopters.

India must tread warily as

it picks what it needs without upsetting either side. On nuclear Iran, while the US has attempted to bully Delhi into following its fiat and failed, Russia and India have a more equitable understanding reflected in the joint statement.

Most analysts have used the Putin visit to ask what India gets out of each relationship. For India, Russia is not just a long-standing ally, unwavering in its support on the challenges posed by geopolitics and terror groups.

It's also a voice of caution that is worried today that even with the jihad seemingly on hold, the 'Greater Kashmir' the

United States is steadily pushing India towards could be as destabilising to Delhi as it is to its own interests in the vast swathe of states along its underbelly.

For both Russia and India, while the public discussion centred on arms, it is Afghanistan and Kashmir that is a continuing and all too real example of what can happen when national interests collide.

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[Abridged version of the original available at < <http://archive.gulfnews.com/opinion/columns/world/10099943.html> >.]

Flaws in the Pro-Nuclear Argument

M V Ramana and Suchitra J Y

Flailing nuclear establishments worldwide are using global warming as an opportunity to resurrect an industry that has collapsed because of its inability to provide clean, safe, or cheap electricity. India too is forging ahead, mindless of the fact that nuclear energy is not environment-friendly, safe or economical. Thousands of crores of investment later, just 3% of India's installed electricity-generation capacity comes from nuclear energy. This investment is at the cost of promoting other more sustainable sources of power

"And it is worthy of note that the systems which the Europeans have discarded are the systems in vogue among us. Their learned men continually make changes. We ignorantly adhere to their cast-off systems"

--Mahatma Gandhi, Hind Swaraj

Nuclear power is in the news these days in a new incarnation — as an environmentally sustainable source of electricity. For example, the recent



'Declaration by India and France on the Development of Nuclear Energy for Peaceful Purposes', signed in February 2006, begins with the "recognition" that "nuclear energy provides a safe, environment-friendly and sustainable source of energy".

The sheer audaciousness of terming a technology that was responsible for perhaps the most destructive industrial accident ever — the Chernobyl explosion

of April 1986 — safe, cannot but cast doubt on the rest of those contentions. And yet, by being repeated time and again, such claims do begin to resonate with the public and gain acceptance. It is therefore necessary to look beyond the glossy exterior and analyse why

nuclear power is not sustainable. As we argue below, it is neither environment-friendly, nor safe, nor economical.

This new incarnation of nuclear energy has arisen in the context of increasing global warming. Pro-nuclear advocates have offered nuclear power as a solution to global warming, and given the gravity of the likely impact of impending climate change, it is not surprising that many have started looking at it more favourably. Flailing nuclear establishments around the world have grabbed this second opportunity and made claims for massive state investments, in the hope of resurrecting an industry that has collapsed in country after country due to its inability to provide clean, safe, or cheap electricity.

Two implicit but flawed assumptions underlie such claims about the significance of nuclear energy in controlling climate change. The first is that climate change can be tackled without confronting and changing Western, especially American, patterns of energy consumption — the primary causes and continuing drivers of unsustainable increases in carbon emissions and global warming. This is impossible; global warming cannot be stopped without significant reductions in the current energy consumption levels of Western/developed countries. Efforts by various developing countries, especially by elites within such countries, to match these consumption levels only intensify the problem.

The second is that the adoption of nuclear power makes sense as a strategy to

lower aggregate carbon emissions. A good example is Japan, a strongly pro-nuclear energy country. As Japanese nuclear chemist and winner of the 1997 Right Livelihood Award, Jinzaburo Takagi showed, from 1965 to 1995, Japan's nuclear plant capacity went from zero to over 40,000 MW. During the same period, carbon dioxide emissions went up from about 400 million tonnes to about 1,200 million tonnes. In other words, increased use of nuclear power did not really reduce Japan's emission levels. The massive expansion of nuclear energy, then, was not motivated by a desire to reduce emissions. If indeed Japan were sincere about doing that, it would have adopted very different strategies.

There are two reasons why increased use of nuclear power does not necessarily lower carbon emissions. First, nuclear energy is best suited only to produce baseload electricity, which only constitutes a fraction of all sources of carbon emissions. Other sectors of the economy where carbon dioxide and other greenhouse gases are emitted, such as transportation, cannot be operated using electricity from nuclear reactors. This situation is unlikely to change anytime soon.

A second and more fundamental reason is provided by John Byrnes of the University of Delaware's Centre for Energy and Environmental Policy, who observes that nuclear technology is an expensive source of energy and can be economically viable only in a society that relies on increasing levels of energy use.

Nuclear power tends to require and promote a supply-oriented energy policy, and an energy-intensive pattern of development, and thus, in fact, indirectly adds to the problem of global warming.

Though not motivated by such radical and far-reaching analysis, even mainstream environmentalists recognise that building new nuclear plants is not an answer to tackling climate change. For instance, a major 2006 report by the United Kingdom (UK) government's Sustainable Development Commission (SDC) concludes that doubling nuclear capacity in Great Britain would have only a small impact on reducing carbon emissions by 2035. In addition, the report identifies the following five major disadvantages to nuclear power:

- ⇒ No safe long-term solution to the problem of radioactive waste from nuclear plants is available, let alone acceptable to the general public.
- ⇒ The economic costs of nuclear power are uncertain but much higher than those of alternative sources of generating electricity.
- ⇒ Nuclear energy requires and will lock the country into a centralised distribution system for many decades, and hinder the development of distributed energy-generation technologies that are rapidly emerging as important sources of electricity.
- ⇒ The signal offered by nuclear programmes that what is needed to tackle climate change is just a major technological fix

undermines energy efficiency imperatives.

All of these factors are just as relevant in India as in the UK; to these one might add some more based on our own atomic history. Let us take a closer look at the Indian atomic energy programme, which will illustrate or adumbrate some of the points made by the UK Sustainable Development Commission.

India's nuclear establishment: Promising much, delivering little

The Indian nuclear establishment, like similar institutions elsewhere but only more dramatically so, has historically promised much and delivered little. Since its inception, the Department of Atomic Energy (DAE) has been promoting nuclear power as the answer to our energy needs. According to the DAE's predictions, by 2000 there should have been 43,500 MW of nuclear-generation capacity in the country, while what has been realised even now is only 3,310 MW, less than 3% of the installed electricity-generation capacity. Even by the DAE's projections, this will not become a significant fraction of India's electricity for the next few decades.

Such continued failures are not because of lack of resources. Practically all governments have favoured nuclear energy and the DAE budgets have always been high — a trend that has intensified after the 1998 nuclear weapons tests. According to the Union Expenditure Budgets, the DAE's budget estimate has increased from Rs 1836.53 crore in 1997-98 to Rs 5505.08

crore in 2006-07, ie, it has more than doubled even in real terms.

The high allocations for the DAE come at the cost of promoting other more sustainable sources of power. In 2002-03, for example, the DAE was allocated Rs 3351.69 crore, dwarfing, in comparison, the Rs 473.56 crore allocated to the Ministry of Non-conventional Energy Sources (MNES), which is in charge of developing solar, wind, small hydro and biomass-based power. Despite the smaller allocations, installed capacity of these sources was 4,800 MW (as compared to 3,310 MW of nuclear energy). While their contribution to actual electricity generated would be smaller since these are intermittent sources of power, they have much lower maintenance costs. Further, most of these programmes, like wind, began in earnest only in the last decade or two, and there is ample scope for improvement. This relative lack of attention to renewable and decentralised systems of electricity generation illustrates the third

point highlighted by the UK SDC.

The experience with India's nuclear programme also exemplifies the UK SDC's argument regarding the economics of nuclear power. A comparison of the costs of generating electricity from nuclear and coal-fired thermal power plants, using the standard discounted cash flow methodology, shows that nuclear power is competitive only for low discount rates (see Figure 1); for a wide range of realistic parameters it is significantly more expensive. The discount rate is a measure of the value of capital, and given multiple demands on capital for infrastructural projects, including for electricity generation, such low discount rates are not realistic. A larger proportion of nuclear capacity therefore implies that poorer sections of society cannot afford electricity, at least without greater subsidies. It also implies that there are many far cheaper ways of reducing carbon emissions.

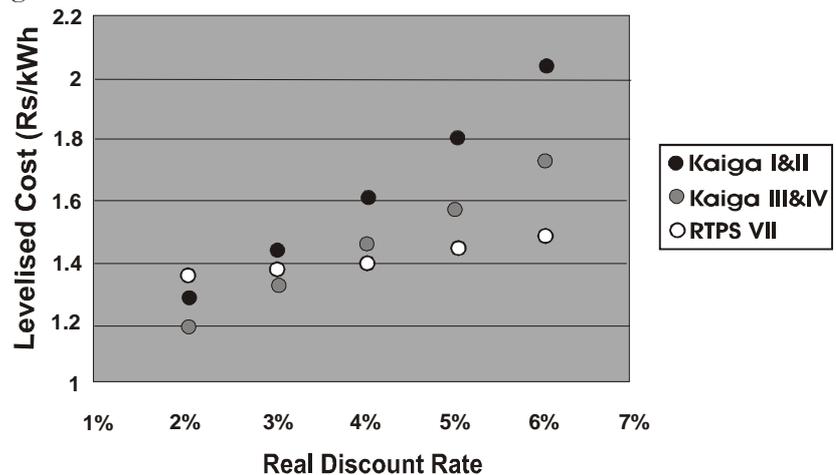


Figure 1: Levelised cost (the bare generation cost which does not include other components of electricity tariff like interest payments and transmission and distribution charges) of Kaiga I and II (operating reactors), Kaiga III and IV (reactors under construction; projected costs), and RTPS VII (operating thermal plant) as a function of real discount rate (a measure of the value of capital after taking out the effects of inflation)

The results shown in Figure 1 are based on the costs of generating electricity at the Kaiga Atomic Power Station and the Raichur Thermal Power Station (RTPS) VII — both base load plants of similar size and vintage in Karnataka. The coal for RTPS VII is assumed to come from mines 1,400 km away. The largest component of the cost of producing electricity at nuclear reactors is the capital cost of the reactor, which includes the construction cost (Rs 1,816 crore for Kaiga I and II, and Rs 2,727 crore for Kaiga III and IV) and the cost of the initial loading of uranium fuel and heavy water used in the reactor. The corresponding capital cost in the case of RTPS VII is Rs 491 crore. (The capital costs mentioned do not include the interest during construction.)

This economic comparison is largely based on assumptions favourable to nuclear power. In particular, the calculated cost of coal-generated electricity internalises the cost of disposing flyash in an environmentally responsible fashion, but the nuclear costs do not include those of dealing with radioactive waste.

There is no credible

solution to the problem of radioactive waste; the best that can be done is short-term management. The DAE treats spent nuclear fuel by reprocessing it and segregating the waste into different categories on the basis of their radioactivity. Reprocessing also allows the separation of plutonium, which, with further treatment, can be used as fuel in breeder reactors. Reprocessing, however, is expensive. Based on a careful examination of the budgets of the DAE, we estimate that the cost of reprocessing each kilogram of spent fuel from the DAE's heavy water reactors is in the range of Rs 20,000-30,000. The Nuclear Power Corporation does not include this cost in its tariff estimates; if included, it would increase the unit cost by Rs 0.40 to 0.60.

Besides the economic cost, the waste stays radioactive for tens of thousands of years, posing a potential health and environmental hazard to thousands of future generations. This is clearly iniquitous since these generations would bear the consequences while we use the electricity generated by these reactors. Ethical dilemmas

aside, no technology that generates such long-lived radioactive waste can be considered environmentally sustainable.

Further, different stages of the nuclear fuel chain release large quantities of radioactive and other toxic materials into the biosphere. Thus, the claims of nuclear energy being environment-friendly are absolutely baseless. The nuclear fuel cycle is polluting, albeit in a different way from coal power. Climate change may be a grave danger confronting us, but it should not blind us to other environmental hazards.

There is some evidence within our country of the adverse impact of such pollution. In the early-1990s, a scientific study on the health of the local population around the Rajasthan Atomic Power Station (RAPS) located at Rawatbhata near Kota observed statistically significant increases in, *inter alia*, the rates of congenital deformities, spontaneous abortions, stillbirth and one-day deaths of newborn babies, and solid tumours. Some of the data is summarised in Table 1. Similar problems have been seen in the uranium mining area of Jadugoda in Jharkhand.

Table 1: Incidents of deformities, stillbirth and abortions		
Deformities	Proximate villages	Distant villages
Total population	50	14
Above 18 years	5	4
Below 18 years	45	10
Below 11 years	38	6
Below 2 years (live born)	16	3
Stillborn children and abortions in the two years prior to the survey		
With deformities	4	0
Without deformities	2	0
Abortions	27	5
<i>Note: Proximate villages are those near the Rajasthan Atomic Power Station (RAPS) Source: Anumukti Volume 6, Number 5, April/May 1993</i>		

These environmental and public health impacts result merely from routine radioactive releases from the nuclear fuel chain. Much worse could result from the catastrophic accidents that nuclear reactors and other (non-reactor) facilities are uniquely susceptible to. Chernobyl, the best-known instance of such a disaster, not only resulted in several thousand deaths but also contaminated thousands of square kilometres of land with radioactive elements like Cesium-137. Agriculture had to be suspended, over 100,000 people had to be relocated, and the economy of Belarus was devastated. In 1957, a tank containing radioactive waste from the Mayak reprocessing plant in the erstwhile Soviet Union exploded and contaminated 20,000 square kilometres. India, still a largely agriculture-dependent economy, can simply not afford the risk of such a disaster.

It is often stated that safety issues have been adequately addressed after the Chernobyl accident. However, the basic features of a nuclear reactor remain the same. It is a complex technology involving large quantities of radioactive material where events can spin out of control in a very short time. In studying the safety of nuclear reactors and other hazardous technologies, sociologists and organisation theorists have come to the pessimistic conclusion that serious accidents are inevitable with such complex high-technology systems. The character of these systems makes accidents a 'normal' part of their operation, regardless of the intent of their operators and other authorities. In such

technologies, many major accidents have seemingly insignificant origins. Because of the complexities involved, all possible accident modes cannot be predicted and operator errors are comprehensible only in hindsight. Adding redundant safety mechanisms only increases the complexity of the system allowing for unexpected interactions between sub-systems and increasing new accident modes. All of this means that there is no way to ensure that reactors and other nuclear facilities will not have major accidents.

There is an experiential basis for concern about such accidents within India. Practically all the nuclear reactors and other facilities associated with the nuclear fuel cycle operated by the DAE have witnessed accidents of varying severity. A few examples are the unexplained power surge at the Kakrapar reactor in 2004, the 1993 fire at Narora, and the collapse of the containment at Kaiga in 1994. Because of the reasons mentioned above, many of these accidents could well have become the basis for a major radioactive release.

A further source of concern is the fact that the Atomic Energy Regulatory Board (AERB), which is supposed to oversee the safe operation of all civilian nuclear facilities, is not independent of the DAE. Further, as Dr Gopalakrishnan, the former chairman of the AERB has observed, "the AERB has very few qualified staff of its own, and about 95% of the technical personnel in AERB safety committees are officials of the DAE, whose services are made available on a case-to-case basis for conducting the reviews of

their own installations. The perception is that such dependency could be easily exploited by the DAE management to influence the AERB's evaluations and decisions".

To conclude, the experience of over 50 years of experimentation with nuclear power demonstrates that it cannot be considered a safe, economical, or environmentally sustainable source of electricity. It is being recognised the world over that nuclear energy neither ensures true energy security, nor addresses the issue of global warming. Despite powerful lobbies pushing for the expansion of nuclear energy due to concerns about climate change, several Western countries have decided to phase out nuclear power. The United States has not constructed a new nuclear reactor in over two decades. If current trends continue, it appears that the share of nuclear energy globally will only decline in the years to come. India, then, is attempting to swim against the tide by trying to get into nuclear power in a big way, a tragic illustration of the continued relevance of Gandhiji's warning in the epigraph, nearly 60 years after Independence.

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[Source: InfoChange News & Features, June 2006

http://www.infochangeindia.org/agenda5_09.jsp#

Deep Divide Over Nuclear Power

**Capt.J.Rama Rao V SM, FIE,
Indian Navy (Retd)**

The early dreams of Nuclear Power proponents appear to have faded, where as the risks have remained, as well as the danger of misuse by military interests. Terrorism has introduced a dramatic, concrete threat. The finite nature of fossil fuels and global warming do not dispel the major safety issues and hazards associated with nuclear power. The 'accident proof' reactor has remained an unfulfilled promise now for decades.

But the friends of nuclear-based electricity generation are gratified by the fact that the discussion on nuclear policy has shifted from the fundamental problems of safety and security, to issues associated with the economy, environmental protection (global warming) and resource conservation. They would like to see a shift in the public opinion toward viewing nuclear power as one of the technologies, like coal fired power plants, windmills etc to meet the growing demands of power and to reduce global levels of greenhouse gasses emissions.

The nuclear power is being pushed into the triangle that economists use to frame the debate on Energy Policy; namely economic feasibility, reliable supply and environmental compatibility. Even within this framework, many questions remain regarding the advisability of opting for nuclear power.

But the nuclear energy's unique potential for catastrophe

is being concealed behind the wall of arguments that distract from the basic issues of Safety and Security. This is the result of a deliberate and tenacious strategy for years by operators and vendors in the major nuclear power producing countries.

Therefore, the urgent need of the hour is to take a look, if the industry's claims that Nuclear Energy is Safe, Cheap, CO2 Free and Renewable. One also needs to examine its efficiency and cost-effectiveness, apart from the transparency in its functioning. Let us take a look at a few aspects of nuclear technology and the claims being made:

Is Nuclear Power Experiencing a Comeback?

There is lot of political talk about nuclear power being the solution to all our energy problems, but in practice not much happened. In 1989 there were 172 operating nuclear reactors in Europe. There are now 147-15% less. Since the Chernobyl disaster in 1986, only one construction process of a nuclear power plant has started in Europe (Finland).

Despite nuclear power's promise as a clean energy source that could hold down emissions of global warming gases, most environmentalists are skeptical of the latest claims by its advocates. They say that utilities, at best, will move ahead with a handful of plants that will receive lavish incentives from the government. But the risks of nuclear power are still

so high, they argue, that no utility will be willing to put its own money into building a plant unless the governments heavily subsidizes it.

"What dismays me about the present situation is the extent to which the Congress and the administration, and now an occasional state legislature, have rushed to anoint it as the solution to climate change," said Peter A. Bradford, a former member of the Nuclear Regulatory Commission and former Chairman of the Public Service Commissions of both Maine and New York. If nuclear plants cannot compete without subsidies, he said, they should not be built.

The proponents of Nuclear Power profess that the present day reactors are 'accident proof' and there is no danger of accidents. It is also argued that of all the conventional options, Nuclear energy has posed the least risks in terms of mortality per billion megawatt hours of power generation and more people die in road accidents than in nuclear reactor failures / accidents. Does that mean that we should carry the Snake around our neck as less people die of Snake bites? What needs to be considered are the anticipatory risks and hazards of the entire life-cycle of nuclear power i.e. from uranium mining to disposal of spent uranium, instead of considering the hazards of nuclear reactors in isolation.

Is Nuclear Energy (fission) an Infinite Source?

Nuclear energy makes us dependent on uranium, which is a limited resource. If the current level of nuclear energy production is maintained, it is estimated that all (currently and future) accessible uranium would be dug up in next 50 years. There is more uranium on the planet, but it is either very difficult and / or expensive to mine or not suitable for use in electricity production. The associated energy use and CO₂ emissions would rise steeply. As per one estimate, the entire accessible uranium in India is just enough to produce 10,000 MW!

Foundation Science, PHYSICS for Class 10, authored by H.C.Verma PhD and published by Bharati Bhavan, in page 142, it is stated that “Unlike fuels like coal, nuclear fuels such as uranium and thorium are required in very small quantities to generate electricity in power plants. The reserves of nuclear fuels, although limited, will last for long, long time. They are therefore also classified as renewable sources of energy”. This highlights, how the scientific distortion of facts is taking place even at the school level?

Does Nuclear Energy provide Energy Security?

The present share of nuclear energy in the total global energy consumption is reported to be just 2.7%, with 442 nuclear power plants worldwide. The China has been forecasting the construction of numerous nuclear power plants over the last 25 years but so far,

it has only built eleven out of which three are very small. In India, the installed capacity of the nuclear power plants is just over 3,300 MW, much lower than the power generated from Wind Mills.

If the entire accessible uranium (currently and future) is estimated to last for only next 50 years, at the current level of nuclear power production, which is hardly 3%, how does it provide global energy security? If India has to depend on imported nuclear fuel (uranium) as stated by AEC Chairman (beyond what is possible based on the domestic programme), how is country's energy security guaranteed?

Must Energy Consumption Rise in Lockstep with Economic Growth?

It embodied the myth that economic vitality requires steadily increasing energy consumption. But people do not want supplies of raw energy, such as kilowatt-hours or barrels of oil. Rather they want the services that energy can provide – comfort, illumination, mobility, steel making etc. On the other hand the increasing energy use, costs and pollution would spiral upwards together, further imperiling National Security, the Economy and the Environment.

The present method of Economic Accounting does not internalize the environmental costs, due to environmentally harmful economic growth. Since the present calculations used to produce GNP/GDP, do not consider Environmental Accounting, namely— the destruction or depletion of natural resources, the negative impact of environmental damage on the economic

welfare of the society, present & future, and the treatment of degradation or depreciation of natural and environmental resources— this popular economic measure is extremely misleading. It tells us we are making progress even as our ecological foundations are crumbling.

The per capita energy consumption of energy in India, is just 3.5 per cent of the per capita energy consumption of the US, 6.8 per cent of Japan, 37 per cent of Asia, and 18.7 percent of the world average. India's energy intensity (energy consumption per unit of GDP), however, is high compared to Japan, the US, and Asia as a whole by 3.7, 1.55 and 1.47 times respectively. This indicates inefficient use of energy with a substantial scope for energy savings.

It is nothing but suicidal trying to target for higher per capita consumption of energy, instead of trying to improve efficiency and cutting down the energy intensity, through technological innovations.

Does Nuclear Energy Combat Climate Change?

During the complex cycle of nuclear energy production (uranium ore mining, transportation, processing, enrichment, production, reprocessing, decommissioning, waste storage) a lot of energy is required and used - energy that comes mostly in the form of fossil energy. Nuclear energy is a very energy-intensive way of producing electricity.

Extensive studies have shown that each dollar invested in using energy more efficiently by the consumers reduces nearly Six times more CO₂, than a

dollar invested in nuclear power. Nuclear Power is a hopeless substitute for Oil ! The energy efficiency measures and renewable energy sources are cheaper and faster ways to combat climate change.

Is Nuclear Energy Cheap?

When nuclear reactors were first commercialized almost half a century ago, every self-respecting electric utility wanted one. They were encouraged by a government that saw nuclear energy as a peaceful, redemptive byproduct of the deadly power unleashed at Hiroshima. The US federal official for promoting nuclear energy, Lewis L. Strauss, said it would produce electricity "Too cheap to Meter." It has never given consumers anything like that. But with the industry now consolidated so that most reactors are in the hands of a comparatively few operators, utility executives are sharply divided over whether nuclear power offers an attractive choice as they seek to satisfy a growing demand for electricity.

Nuclear energy is not only a high-risk technology in terms of safety, but also with respect to financial investment. It does not stand a chance in a market economy without state subsidies. The costs for decommissioning are very high and the cost of isolating radioactive byproducts/wastes from the biosphere and safeguarding them for hundreds of thousands of years, which defy human imagination, cannot even be estimated.

There is lot of public money going into nuclear research, safety investments etc. Of the total annual energy

subsidies in the EU between 1990 and 1995, 23% went to nuclear energy and only 7% to renewable energy sources. In India the entire nuclear energy is funded by public money at the cost of renewable sources of energy.

While computing the economic cost of any generating facility the economic calculation of different energy systems should include all costs and benefits for society by their production and use.

Who is Accountable for Hazardous Radioactive Wastes?

The more important issues like the problems of radiation right from Mining and Processing of uranium ore to production of Nuclear energy to the storage of Nuclear Waste are being overlooked. The quality of the uranium ore in India is so low, i.e., only 0.0407%. Getting hardly one ton of usable uranium from 3000 tons ore processed every day. The only thing that will be left after 300 days of operation per year and 30 years of mining and processing, is a mind boggling, 2 Crores and Seventy lakh (27 million) tons of RADIO-ACTIVE WASTES, spread all over the surrounding areas, contaminating air, soil, underground and surface waters.

Who is accountable for all these radioactive wastes, which will be left unattended after the closure of the mines and will continue to affect future generations for hundreds of thousands of years, which defy human imagination? But political expediency makes even honest people with integrity, overlook fundamental stark naked truths.

What are the Viable Alternatives for Sustainable Energy Security?

Nuclear power is not sustainable, because its fissile fuel materials are as limited as fossil fuels such as coal, oil and natural gas. It does not stand a chance in a market economy without state subsidies. It is also high-risk technology in terms of safety and also with respect to financial investments.

There is a huge potential of Energy Savings, which is estimated to be about 25 % of the energy consumption in India, through energy efficiency measures and technologies, which in combination of renewable sources of energy, are much cheaper and definitely much safer than building new nuclear power plants. Therefore the energy efficiency coupled with renewable sources of energy is faster and comparatively cheaper, safer and cleaner sources of energy available.

In Lieu of a Conclusion

The above are a few thoughts and opinions compiled from various sources and are open for debate and correction, with a view to find solution for the sustainable Energy Security of our country. The Human beings are at the centre of concerns for Sustainable Development and the Human beings are entitled to a healthy and productive life in harmony with nature, keeping the human being as the central focus of all developmental activities.

[Acknowledgement by the author: World Information Service on Energy (WISE).

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Radiation Causes Metal Retardation: Extracts from a Field Survey Report

Survey of
Mental Retardation and Cancer in the Sand-mining areas in Kanyakumari
District & Kuthankuzhi (Thirunelveli District)
01 10 2006 to 20 11 2006

Prepared by
KARD, Nagercoil & Conservation of Nature Trust, Nagercoil
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Introduction

This study was initiated as it was reported that the occurrence of mental retardation was very high along the Kanyakumari coast due to the prevalence of radioactive sand. Heavy minerals like ilmenite, monazite, zircon, sillimanite and garnet are present in the coastal sand of Kanyakumari District. In these heavy minerals monazite contains 4-8% thorium phosphate, an alpha ray emitter. In recent years the importance of thorium has increased mainly due to its need in the nuclear industry. Thorium is used as a nuclear fuel along with uranium.

Methodology

The high level radioactive village of Manavalakurichi was selected along with one low level radiation place, Thoivalai Panchayat located in the Thoivalai taluk full of wetlands. The investigation period was from October 1 to November 20, 2006. Well-trained observers were selected and asked to collect the data in a pro forma.

Another high radiation area outside the district was also

studied. This village (Kuthankuzhi) has a very high incidence of mentally retarded children. In this village 105 house holds were identified.

Findings

It was found that the Manavalakurichi Panchayat has 31 numbers of mentally retarded people and 8 people were affected by cerebral palsy. In Thoivalai Panchayat, 12 people were mentally retarded and 3 people had cerebral palsy. Even though the population of Thoivalai is approximately half that of Manavalakurichi, the figures in Manavalakurichi are still comparatively high. Kuthankuzhi was found to have 42 mentally retarded persons.

gross alpha radiation and 2,970-99,040 Bq/ kg dry weight of gross beta radiation (Appendix 10). Becquerel (Bq) is the rate of disintegration of atoms per second. Radioactive minerals produce electrons, which can irradiate the body by changing its DNA configuration, which can cause deformities. In Manavalakurichi, the Indian Rare Earths Limited has been processing sand on the beach since the 1950s. In Kuthankuzhi, a private sand mining company had been taking coastal sand for a long time.

In Thoivalai Panchayat the radiation levels were low. They ranged from 50-260 Bq/kg of

Place	Households with MR/CP	Population	MR*	CP**	Highest Radiation	
					Alpha (Bq/kg)	Beta (Bq/kg)
Manavalakurichi	109	10,472	31	8	9,780	69,260
Thoivalai	66	4,605	12	3	260	3,920
Kuthankuzhi	105	4,630	42	8	15,000	99,040

* Mental retardation; ** Cerebral palsy

The background radiation in the two coastal villages was very high ranging from 1,250-15,000 Bq/kg dry weight of

gross alpha and 2,660-6,900 Bq/kg of gross beta. Here the incidence of mental retardation was also low.

Conclusion

One of the reasons for mental retardation is high background radiation. Radiation in Kerala was studied by Sankaran et al (1986), Prakash et al (1991), and Murali Das et al (2001). It has been shown that the south west coast from Trivandrum to Kanagappuram has radiation levels exceeding 235 mr/year - ten times more than normal levels.

In the present study, the radiation of alpha and beta was found to be as high as 69,260 Bq/kg (gross beta) and 9,780 Bq/kg (gross alpha) dry weight in Periaivilai where the Indian Rare Earth Ltd is located. In Chinnavilai on the other side of the IREL, radiation levels were found to be 6,890 Bq/kg of alpha and 38,500 Bq/kg Beta (dry weight). The incidence of mental retardation is also high here.

At 5 m rem/year the whole body is considered to be safe. Alpha particles are dangerous only if emitted within the body. Beta particles are dangerous when emitted within the body and can penetrate the skin. Gamma rays can penetrate the body.

The survey has shown that incidents of MR persons and cancer are significantly higher in coastal villages in Kanyakumari and Thirunelveli districts due to the high background radiation. This is increased in places where there is sand mining. More detailed surveys in the entire districts are required to further investigate this phenomenon.

[For the complete report write to: samuelji2003@yahoo.com.]

China's Test May Make India a Star Wars Satellite

J. Sri Raman

When China destroyed one of its own aging weather satellites with a ground-based ballistic missile on January 11, the media recorded a more than mildly earthshaking event. The impact of the event on South Asia, however, needs greater notice than it has received.

The successful anti-satellite missile (ASAT) test has sounded an alarm about a global arms race in outer space. An important step towards the race may be witnessed in China's immediate, southern neighborhood. India's response to the test may become part of a reckless reply from the US under the George Bush administration to the apparently unexpected Beijing move.

The official Indian response has been guarded. The "security think-tank," known to speak for the politically more circumspect establishment, has greeted the test with a clear enough call for the country moving for a closer tie-up with the Bush-modified missile-defense program.

Officially, concern was voiced over the test, with Indian Air Force chief S. P. Tyagi talking of the major role for space "in all future wars" and adding: "If we have assets in space, somebody will try to knock them off through hard kills or soft kills. We must be ready for all this." Former chief adviser to India's Defense

Research and Development Organization (DRDO) K. Santhanam was more explicit: "China's ASAT test is definitely a concern for all countries with satellite launch capabilities. Satellites, after all, form an important part of C3I (communications, command, control and intelligence) systems."

The think-tank's point was made trenchantly in an editorial of January 20 in the well-known daily Indian Express, with National Security Advisory Board member C. Raja Mohan as its Strategic Affairs Editor. Said the paper: "Amidst the emergence of a brash new space power in its neighborhood, India can either respond with a robust military space effort in collaboration with the US or consign itself to the status of a second-rate power in Asia."

The paper spelt out its meaning by voicing outrage at past opposition to "offers from the Bush administration to assist India in the development of (its) missile development program." Stating that "India needs partners in space," the article added: "It does not take a rocket scientist to figure out that the US leads the list of such partners:"

Mainstream Indian media are assisting official and crypto-official attempts at publicizing an alleged

commonalty of space security perceptions and interests between India and the US. They are, thus, making out a case for extending the much-advertised US-India “strategic partnership” to space.

Unnamed sources in the space research establishment have been quoted as vouching that India has the technology to build a satellite-killer similar to China’s, but vowing that India won’t “use its prowess for military purposes.” These sources also suggest that India, too, like the US, has a policy and program that accord military importance to its space assets.

The claim has been made in connection with India’s Cartosat-2 satellite, sent into space by a polar satellite launch vehicle (PSLV) on the eve of China’s ASAT test. With the launch of January 10, say the sources, India’s satellite-based surveillance and reconnaissance program is “finally heading towards completion.”

The program, they add, “will allow India to keep closer tabs on troop movements, missile silos, military installations and airbases of neighboring countries, as well as augment surveillance over Indian airspace.”

It needs to be noted that all the important missiles tested by India are nuclear-capable. Among missiles of a lesser range, Prithvi (Earth) II (with a 250-km reach and a relatively light payload) has been hailed as ideal for nuclear missions. New Delhi has claimed that the Agni (Fire) series of intermediate-range ballistic missiles will only

deliver conventional warheads. Experts, however, say that the cost of any of these missiles cannot be justified unless it is used as a nuclear delivery vehicle.

Agni III, tested without success last July, has long been projected as a deterrent against China. With a range of over 3,000 kms, it is capable of hitting Chinese cities, including Beijing and Shanghai. The security think-tanks are silent on any links between the failure of the test and the flurry of “offers” from the Bush administration to assist in India’s missile program.

The idea of India’s induction into the US missile defense and theater defense is nothing new. The first major indication of an attempt at US-India “strategic partnership,” in fact, came with former prime minister Atal Bihari Vajpayee’s warm welcome to the missile programs of the Bush administration. Appropriately, it came on the third anniversary of India’s nuclear weapons tests, falling on May 11, 2001.

Vajpayee applauded “President Bush’s vision of nuclear disarmament” and read the missile-defense programs as a move for “sharp reductions” in the US nuclear arsenal. The two countries promptly began talks on the proposal of an anti-missile shield that was tabled by Washington.

Vajpayee’s successor, Prime Minister Manmohan Singh, has only carried the idea further. In my Truthout report last July (“Star Wars” Premiers in India!), I noted the next major move towards missile defense

and development cooperation. On June 27, 2005, former US defense secretary Donald Rumsfeld and India’s former defense minister Pranab Mukherjee signed a ten-year agreement titled the New Framework for US-India Defense Relationship (NFDR). The agreement has a provision for India’s induction into the missile-defense program. The Bush administration lured India into its global missile-defense (GMD) program with the bait of a weapons system (PAC3) that was bound to destabilize the subcontinent.

We noted then the irony of the Bush regime, which prided itself as a promoter of the India Pakistan peace process, taking a step that was bound to trigger a fresh arms race in South Asia. Considerations of peace in the region are not likely to weigh any more heavily on Washington in the present instance as well.

India’s induction into the missile-defense program will have even larger implications now. It cannot remain unlinked to the US role as a security guarantor for Taiwan - a role that China’s ASAT 1 test is seen to threaten seriously.

[Source: http://www.truthout.org/docs_2006/printer_012607N.shtml]

Once Bitten

A state with temporary borders would spell the end of the Palestinian cause and rights

Dr. Mustafa Barghouti, MP

Every now and then it is useful to take a closer look at the nature of the ongoing struggle in Palestine, for it is easy to miss the forest for the trees.

The general idea is simple. The Palestinians are struggling for a fully independent state on all the land occupied in 1967, including Jerusalem, and demanding recognition of the rights of Palestinian refugees. Meanwhile, Israel, which wants to sustain a system of apartheid and domination, is trying to get the Palestinians to accept a state with temporary borders determined by the route of the illegal Wall, minus Jerusalem and other areas, and minus independence. Israel's recent decision to build a new settlement in the Jordan Valley is a case in point.

Shall we have a comprehensive and final solution to the conflict, or a temporary and interim one similar to that of the Oslo Accords? This is the big question facing the Palestinians and the international community today. A long-term transitional deal is what Israel wants.

The Israelis want to force the Palestinians to give up large segments of the West Bank, including Jerusalem, and abandon refugee rights and Jerusalem as part of an interim solution. But such a solution is likely to be permanent, not temporary.

Also, Israel wants the Palestinian Authority to remain ineffective and shorn of sovereignty. It wants the Authority to act as Israel's bodyguard while Israel maintains all economic, political and security power.

Israel is pushing for an interim solution because it doesn't want the Palestinians to benefit from opportunities the US debacle in Iraq, Afghanistan, and the rest of the Middle East has created. With the Baker-Hamilton report calling for a solution to the Palestinian problem and with the international community increasingly critical of Israel's policies, the tide is turning. Who would have imagined that a former US president, Jimmy Carter, would conclude that apartheid is worse in Palestine than it ever was in South Africa? The pressure on Israel is mounting, as is evident in the Spanish-French-Italian call for an international peace conference and a final settlement of the conflict. Europe wants a lasting solution to the Palestinian issue, and Israel — **fully cognizant — is buying time.**

Israel is trying to weaken the drive for genuine peace in the Middle East. In particular, it is trying to stop US officials from altering their policy in a way that could be beneficial to the Palestinians and to everybody in the region. And the Israelis are yet again using

the Palestinians to avoid the consequences of a just and comprehensive settlement to the 60-year-old conflict and 40 years of occupation.

Here is what Israel is doing. First, Israel is trying to portray the Palestinian scene as part of a regional battle between good and evil, a battle between those who belong to the so-called 'Axis of Evil' and those described as moderates.

Second, Israel is trying to use the conflict between Fatah and Hamas as a power struggle over who controls the Palestinian Authority. The debate has thus been shifted to the nature and composition of government and to the terms under which Israel and other international parties would approve of the Palestinian government. This must not go on.

The Palestinians need a unified national leadership, one that is capable of managing the conflict and breaking the siege. Third, Israel is trying to get Fatah and Hamas to haggle, through some international brokers, over partial and interim solutions. This must also stop. Fatah and Hamas should discuss their differences over the final peace settlement rather than waste their time on who is to negotiate a partial deal.

It is essential for all Palestinian parties to denounce

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Anti-Nuclear Movement in Haripur, West Bengal

Gautam Sen

The Context

For some time now there has been talk of setting up nuclear installations in West Bengal. About four years ago there was talk of setting up the installations in the Sunderban area (at the forested southern tip of the state bordering the Bay of Bengal). Massive protests and criticisms from different quarters and internal dissensions within the major ruling party led to suspension of the project, at least for the time being. Since the beginning of the last year there had been talk of setting up a cluster of nuclear installations in Purba Medinipur. The initial choice had been Egra. But putatively after soil testing, undertaken sometime in May-June 2006, the Nuclear Power Corporation of India Limited (NPCIL) hit upon Haripur as *the* suitable site. The area concerned is a coastal region that is relatively thickly inhabited. The inhabitants are largely fishers, who are organized in fish landing stations (*kbotis*) and the khotis are again inter-connected to form a larger regional organisation under the banner of a national federation of fishers known as the National Fishworkers Forum (NFF). Since August-September 2006 the khoti leaders started sensitizing the fishworkers to the coming peril of eviction and nuclear hazard. When during early November the news of NPCIL visit started filtering in through newspaper reports khoti leaders accelerated the process of local sensitization. Now the events took of as follows:

Event Highlights

➤ From 7-12 November 2006 the NFF had organised agitations all throughout the Indian coast on National and local issues. In

Haripur and the adjoining villages – starting from Dadanpatrabar and including the villages of Saula, Baguran Jalpai, Majilapur, Aladarput, Junput etc. – the agitation concentrated on the issue of impending Nuclear power plant.

- As a part of the above-mentioned agitation thousands of fishworkers marched through Kanthi and blockaded all major crossings resulting in stoppage of all traffic for two hours.
- When the team of experts from NPCIL arrived on 17th November 2006, accompanied by battalions of armed police, the local residents blockaded the road and prevented them from entering the area. The attempt was repeated on the next day. Thousands of men, women and children from villages around the proposed site blockaded all entry points and vowed to embrace instant death rather than rotting through generations as evicted refugees exposed to nuclear menace. The high power team was compelled to retire and the Government beat a retreat for the moment. The Chief Minister however declared his resolve to carry on the project with the NPCIL chairman joining the chorus.
- On 21 November, the Viswa Matsyajibi Dibas (World Fishworkers Day) about ten thousand fishworkers marched through Kanthi to arrive at the town hall where occurred a Peoples' Con-vention against the impending nuclear power plant.
- On 28 November there was a mammoth rally of 12 to 15000

people at the Junput Bus Stand, where, amidst the massive popular presence, was formed the Haripur Paramanu Vidyut Prakaalpa Pratirodh Andolan.

- 8 December – Padayatra of 25 thousand people from Junput to Kanthi.
- 17 December – Another People's Convention at Town Hall where a large team of citizens from Kolkata, consisting of intellectuals and literatteurs, as well as the local MLA, participated
- 19 December – Subhas Chakraborty and Lakshman Seth arrive at the Recreation Club grounds to hold a meeting in favour of the Nuclear Power Plant. The meeting was attended by about less than a thousand people but faced tremendous agitation from eight to ten thousand local residents.
- 28 December – Mahasweta Debi visits Haripur
- 1 January – Mashal Michil (Torch Procession) of ten thousand people in the evening led by the local MLA
- 5 January – People's Convention at Municipality Grounds attended by Meher Engineer (Ex-Director, Bose Institute), Sujato Bhadra (APDR), Pradip Datta (Anti-Nuclear Activist) and Jaya Mitra (litterateur) attended and spoke against Nuclear Power.
- Book Fair (28 Dec to Jan 5) – Book Stall with Poster Exhibition by Haripur Paramanu Vidyut Prakaalpa Pratirodh Andolan.
- Paush Mela going on now (at Junput) – Book Stall, Digital Film shows etc.

Note:

The above is only a resume of highlights. The locality is actually bubbling with events and activities. There are discussions, debates, talks and video shows going on all over the locality, and the molecular processes of resistance continue to gather momentum.

Demand Full Investigation and Remediation

On December 24, 2006, one of the pipes carrying radioactive wastes from the uranium mill to a storage dam had burst, discharging highly toxic wastes into a nearby creek. When released into the environment in such a hazardous manner, the

downstream communities of the disaster and prevent them from using the creek water until it is certifiably safe. Until the creek is safe to use, UCIL should supply water to the impacted communities so that they can continue their necessary activities such as bathing and

has begun repairing the pipe and removing sludge from the creek. This is an important step, but there must be a comprehensive remediation plan for cleaning up the affected sites in Jadugoda and elsewhere. Based on the experience of remediation efforts in the United States, Canada, and elsewhere, some of the major action items that must be included in the plan are to:

1. thoroughly investigate the causes and impacts of the disaster, involving UCIL, appropriate state agencies, and representatives of local community organizations such as JOAR (Jharkhand Organization Against Radiation);

2. compensate the people harmed by the radioactive waste that has been accidentally discharged into the environment;

3. decontaminate the soil and streams that have been affected by the bursting of the pipe;

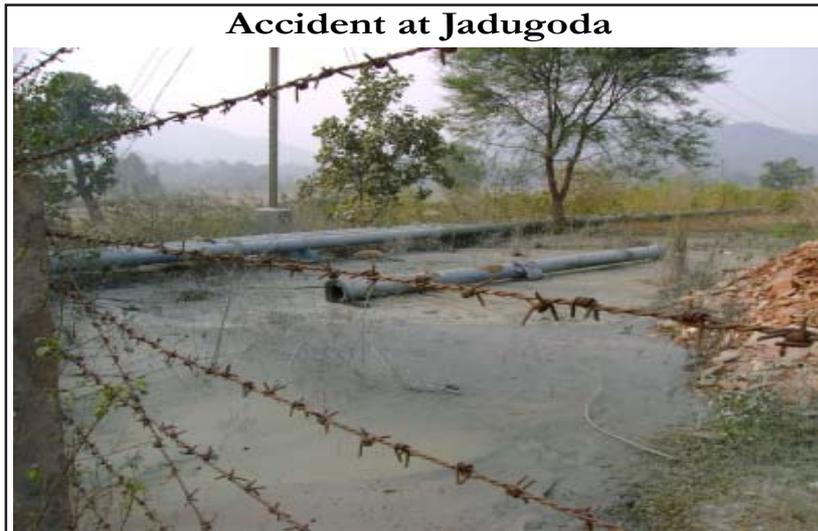
4. create and establish inspection mechanisms and procedures to routinely monitor the quality and safety of UCIL's equipment;

5. regularly measure and monitor the exposure of workers and area residents to the radioactive and hazardous chemical contaminants that are generated by the mining and milling of uranium;

6. create and establish emergency response programs in order to ensure the safe, effective, and timely response to possible disasters; and

7. fully disclose to area residents UCIL's progress in its clean-up of the disaster as well as reports of its inspections and monitoring programs.

[Source: <http://jadugoda.net/>]



radioactive wastes are deadly to the people living in the surrounding area as well as their land and water.

The accident occurred in Dungridih – a small village near Jadugoda inhabited largely by displaced families whose lands were acquired to construct two of the three storage dams, also known as *tailings ponds*. The tailings ponds store all the radioactive wastes generated by the milling of uranium ore in Jadugoda. Based on the experience of similar accidents in other countries, however, the negative effects on human and environmental health will impact communities living downstream, perhaps even hundreds of kilometers away. Therefore, it is imperative that the Uranium Company of India Limited (UCIL) – the owner and operator of the uranium mine, mill, pipes, and tailing ponds in Jadugoda – immediately inform

washing clothes. Also, UCIL may need to provide compensation for families living downstream whose livelihoods depend upon the stream, a tributary to the Subarnarekha River, either for irrigation or fishing.

It is troubling that UCIL did not have its own alarm mechanism to alert the company in cases of such a disaster. Rather, the villagers that had arrived at the scene of the accident soon after the pipe burst informed the company of the toxic spill. Even more reprehensible is the fact that the toxic sludge spewed into creek for nine hours before the flow of the radioactive waste was shut off. Consequently, a thick layer of radioactive sludge along the surface of the creek killed scores of fish, frogs, and other riparian life.

According to reports in local Hindi newspapers, UCIL

CNDP in Action

CNDP at the Indian Social Forum, Delhi

Seminars, under the following heading, on November 10 2006 were jointly organised by the CNDP and the Pakistan Peace Coalition (PPC).

Nuclearisation, Militarisation and Imperialism in the 21 Century: Issues and Challenges for South Asia: Part I and Part II

Admiral (Rtd.) Ramdas chaired the first session and Ms. Iliana Sen the second one. The list of speakers included Praful Bidwai, Sukla Sen, Itty Abraham (USA), Karamat Ali (Pakistan), Dr. Fahim Hussian (Italy), Anuradha Chenoy, Achin Vaniak. et al.

The first session focussed on the global dimensions with specific reference to the role of US imperialism and the current crisis of the NPT and the latest spurt in the arms race.

Various speakers deliberated on the current stage of nuclear arms race and the challenges and roadmap ahead. The latest US role in actively subverting the current architecture of global nuclear non-proliferation order, in the creation of which and giving it a lopsided character from the word 'go', it had played a major role; and the consequent aggravation in global nuclear race and serious setback to the prospects of global nuclear disarmament constituted the common thread running through all the deliberations. India's role, in pursuance of a bigger and bigger role in the regional and global theatre, as an emerging ally of the US in its drive for unfettered

global domination was also located as a cause for great concern.

The second (afternoon) session dealt specifically with the nuclear realities in South Asia. Speakers examined in details the political and strategic implications of the ongoing Indo-US nuclear deal. They also focussed on the accelerating arms race in South Asia. The aggravating nuclear power struggle and its implications.

The speakers also speculated about the feasibility of a South Asian Nuclear Weapons Free Zone (NWFZ).

Speakers from Palestine dealt with in details the situation there.

CNDP and PPC reaffirmed their solidarity with the struggle in Palestine.

Both the sessions had lively and animated interactions between the speakers and the members of the audience.

On November 11 a workshop was held on the role of Peace Education – formal and informal, in building the struggle for peace. Ms. Lalita Ramdas conducted the intensely participated session.

CNDP in Mumbai

In early December 2006, two major events, with national and international participation, took place in Mumbai: International Peace Festival (1–3 Dec.) and People's Foreign Policy Conference (7–8 Dec.)

The CNDP played a major role in the both.

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any partial deals and never accept a state with temporary borders.

The Palestinians need a unified position and strategy. They need a unified leadership, something that has been missing for almost three decades now. The last thing the Palestinians need is for domestic rivalries to distract them from managing their movement towards freedom. Let's bear in mind that political plurality can be a blessing or a curse. It would be a blessing if the Palestinians insist on a comprehensive solution. And it would be a curse if divisions weaken our negotiating position.

We need a government of national unity and we need it soon. More importantly, we need a unified leadership that can organise and coordinate action among Palestinians at home, and in the Diaspora.

Opinion polls suggest that a majority of Palestinians and Israelis want a comprehensive, final solution based on two states. But the so-called Israeli peace movement has become inactive since talks shifted to partial and interim solutions. Israel must come to the realisation that apartheid is a non-starter and that the only way ahead is that of comprehensive peace. We've tried Oslo once. Let's not try it again.

Dr Barghouti is a Member of the Palestinian Legislative Council and Secretary-General of the Palestinian National Initiative.

Documents

Three Press Releases related to the recent visit of the Russian President to India

A. JOINT STATEMENT ON THE OUTCOME OF THE OFFICIAL VISIT OF H.E. MR. VLADIMIR V. PUTIN, PRESIDENT OF THE RUSSIAN FEDERATION TO THE REPUBLIC OF INDIA.

1. The President of the Russian Federation, H.E. Mr. Vladimir V. Putin, paid an official visit to the Republic of India on January 25-26, 2007 at the invitation of the Prime Minister of the Republic of India Dr. Manmohan Singh. President Vladimir Putin is the first Russian Head of State who is participating as the Chief Guest at the celebrations on the occasion of the Republic Day. Besides a high level official delegation, President Putin was accompanied by a group of top Russian businessmen and industrialists representing diverse areas.

2. During his stay in New Delhi, President Vladimir Putin met the President of India, Dr. A.P.J. Abdul Kalam and the Prime Minister of India, Dr. Manmohan Singh. The Chairperson of the United Progressive Alliance, Mrs. Sonia Gandhi called on President Vladimir Putin. President Vladimir Putin also participated in a business meeting attended by high level representatives from the trade and industrial circles of India and Russia.

3. The Prime Minister of India and the President of the Russian Federation recalled with satisfaction their meeting in July 2006 on the sidelines of the G-8 Summit in St. Petersburg where the Russian Presidency had invited India as an outreach country. The two leaders discussed a broad range of issues relating to bilateral cooperation and exchanged views on important regional and international issues of mutual interest and concern. The talks were held in the traditionally warm and cordial atmosphere that is characteristic of the longstanding India-Russia friendship. They noted with particular interest that this visit took place in the year when the two sides were actively preparing to jointly commemorate the 60th anniversary (on April 13, 2007) of the establishment of diplomatic relations between India and the Russian Federation. They expressed satisfaction that, despite many momentous developments affecting global geopolitical situation over the last several decades, India and Russia have consistently

remained close and friendly partners, with a continued commitment at the highest political level to further consolidate their ties. The following documents were signed at the conclusion of the talks between the Prime Minister of India and the President of the Russian Federation. - Programme of Cultural Exchanges between the Government of the Republic of India and the Government of the Russian Federation for the Years 2007-2009;

Protocol between the Government of the Republic of India and the Government of the Russian Federation on holding "Year of Russia in India" in the year 2008 and "Year of India in Russia" in the Year 2009;

- Agreement between the Government of the Republic of India and the Government of the Russian Federation on the access of the Indian Party to navigation signals of the Russian Global Navigation Satellite System GLONASS for peaceful purposes;

- Agreement between the Government of the Republic of India and the Government of the Russian Federation on access of the Indian Party to

a part of the Russian Global Navigation Satellite System GLONASS radio frequency spectrum;

- Agreement between the Indian Space Research Organization and the Federal Space Agency on cooperation in the joint satellite project "YOUTHSAAT";

- Memorandum of Intent between the Department of Atomic Energy, the Government of the Republic of India and Federal Atomic Energy Agency, the Russian Federation on development of cooperation in the construction of additional nuclear power plant units at Kudankulam site as well as in the construction of Russian design nuclear power plants at new sites in the Republic of India;

Also the following were adopted:

- Joint Statement by the Prime Minister of the Republic of India and the President of the

Russian Federation on cooperation in the field of peaceful uses of atomic energy;

- Plan of major events to commemorate the 60th Anniversary of the establishment of diplomatic relations between the Republic of India and the Russian Federation (April 13, 2007).

4. The Sides stress that durable, friendly and mutually beneficial relations between the two countries are based on deep mutual confidence and understanding. The strategic partnership between India and Russia has served not only the long-term national interests of both countries but has also effectively contributed to stability and security in Asia and the world in general. The two countries hold identical or similar views on most international issues. The Prime Minister of India and the President of the Russian Federation highly value the successful practice of holding annual summits that have played a key role in consistently adding greater strategic content to the wide-ranging cooperation between the two countries. These Summits encourage intensive contacts between India and Russia at all levels with a view to further intensifying bilateral cooperation.

5. During the talks, the two Sides reviewed the implementation of the decisions taken during the India-Russia Summit in December 2005. While expressing satisfaction at the ongoing multifaceted cooperation, the Sides support its further development, particularly in priority spheres such as high technologies, telecommunications, outer space, metallurgy, energy, nuclear power and military and technical cooperation.

6. The Sides reaffirm their intention to intensify efforts to further develop and diversify their trade and economic cooperation. Noting that the Indian-Russian Inter-Governmental Commission on Trade, Economic, Scientific, Technological and Cultural Cooperation provides an important mechanism for the development of trade and economic ties, the Sides stress the need to pay particular attention to the further promotion of bilateral trade and investment, including in energy, technology and knowledge-intensive economic sectors.

7. The Sides express satisfaction over the signing in February 2006 of the India-Russia Protocol on completion of negotiations on Russia's accession to the WTO. Particular importance is attached to the setting up of a Joint

Study Group (JSG) in 2006 to work out practical recommendations aimed at effectively tapping the opportunities available in both countries to substantially raise their bilateral trade and economic cooperation. As an immediate step, the Sides support early finalization of a result-oriented programme of action by the JSG to increase their bilateral trade to US \$ 10 billion by 2010.

8. The Sides advocate every possible effort to expand mutually beneficial contacts between the business communities of the two countries. They welcome the initiatives taken in this direction by the industrial and business associations of India and Russia, aimed at strengthening the important role played by the Joint Business Council. The Sides also agree to take steps to remove the existing barriers impeding the promotion of bilateral trade.

9. The Sides appreciate the establishment of the Indo-Russian Forum for Trade and Investment, co-chaired by the Minister of Commerce and Industry of India and the Minister of Economic Development and Trade of the Russian Federation. They are optimistic that its first meeting in India in February 2007 at which a large number of top businessmen from both sides are preparing to participate will yield positive results.

10. Noting the vital role played by energy in economic growth, the Sides attach particular importance to energy security issues. They endorse the concept of 'energy security' envisaging an acceptable balance between security of demand and security of supply. In view of their corresponding resources, needs, capabilities and potential, the Sides agree to further enhance direct dialogue between their oil and gas companies aimed at concluding concrete and mutually beneficial commercial agreements for joint work in all segments of oil and gas cooperation in India, Russia and third countries. The arrival of the first shipment of oil to India from Sakhalin-I in early December 2006 as well as the signing on January 25, 2007 of an MoU between ONGC and Rosneft oil company setting up two joint Working Groups - one each for upstream and downstream activities - demonstrate the viability of future India-Russia cooperation in the entire hydrocarbon value chain. The Sides also expressed satisfaction at the progress in the ongoing construction of two

nuclear power plants in Kudankulam (India) with Russian participation.

11. The Sides note with satisfaction that the progressive expansion of their traditionally important cooperation in the field of peaceful uses of outer space is based on deep mutual trust and high capabilities of the two countries in this sphere. In this context, they particularly welcome the signing of additional bilateral agreements during the present visit to jointly implement wide-ranging cooperation in the Russian Global Navigation Satellite System GLONASS. They also express satisfaction at the signing of a bilateral document to jointly develop and launch a Youth Satellite for educational purposes.

12. Military-technical cooperation between India and Russia has traditionally remained a major pillar of the bilateral strategic partnership. The Sides note with satisfaction that mutually beneficial interaction in the field of defence has steadily progressed from a buyer-seller format to also include joint research and development, manufacturing and marketing, regular service to service interaction and joint exercises. As a leading example of their shared potential in high technological collaboration, the India-Russia joint venture to manufacture Brahmos missile, which is expanding in scope, has led the way to further such joint projects. The Sides note with satisfaction the in-principle decision to jointly develop a new Multi-Role Transport Aircraft.

13. India and Russia, while recognizing vast possibilities offered by rapid development and mass use of information and communication technologies, systems and utilities, including internet, express their concern that along with the gains, new threats of use of information technologies have emerged, which are incompatible with the goals of ensuring international stability and security both in civil and military spheres. The Sides express their readiness to continue bilateral India-Russia dialogue and intensify joint efforts directed at strengthening national and international information security, including combating criminal and terrorist activities.

14. The Sides recall with satisfaction their wide-ranging bilateral cooperation in the field of science and technology that has been successfully and jointly steered and conducted in the framework of the Integrated Long Term Programme (ILTP). They affirm to jointly

commemorate the 20th anniversary (on July 3, 2007) of the establishment of the ILTP. As a major initiative, the Sides welcome the decision to set up an India-Russia Technology Centre in Moscow to facilitate and channelize commercial / industrial applications of new jointly developed technologies. The Sides recognize that this new facet to S&T cooperation would also provide a stimulant effect to the overall scope of joint work. The Signing of the relevant Joint Work Document would enable the Centre to begin concrete work.

15. The Sides have agreed to continue work on the North-South international transport corridor project, in the interests of further development of trade and economic cooperation between India and Russia.

16. Cultural cooperation and people to people contacts have traditionally played an important role in promoting greater understanding and closer friendship between India and Russia. In this context, the Sides welcome the signing of the bilateral Cultural Exchange Programme and the Protocol to celebrate 2008 as the "Year of Russia in India" and 2009 as the "Year of India in Russia". The Sides appreciate ongoing joint efforts aimed at development of partnership relations between institutions of the two countries in the fields of culture, Indian and Russian studies and languages. They agree to consider new mechanisms, including financial, to accelerate this trend through greater interaction between Indian and Russian scholars.

17. The Sides will work towards the establishment of a multipolar world order based on the principles of the rule of law, sovereign equality, territorial integrity and non-interference in internal affairs of States. Activities aimed at strengthening a central coordinating role of the United Nations in maintaining peace and security, and at increasing the efficiency and authority of the UN, form important elements of India-Russia cooperation at the international level. India and Russia stress the need to implement the process of UN reform, so as to reflect contemporary realities. In this context, the Russian Federation reiterates once again that it regards India as an influential and major member of the international community. The Russian Federation reaffirms its support to India as a deserving and strong candidate for the permanent membership in an expanded UN Security Council.

18. India and Russia strongly condemn

terrorism in all its forms and manifestations. Both Sides reaffirm that terrorism is one of the gravest threats to international peace and security, and that there can be no justification for any act of terrorism, irrespective of motivations, wherever and by whosoever committed. They are also convinced that terrorism cannot and should not be associated with any nationality, religious, cultural or ethnic group. The Sides affirm that bilateral cooperation in counter-terrorism is an important dimension of their strategic partnership. They agree to consolidate joint efforts in suppressing financing of international terrorism and fighting illicit drug trafficking.

19. The Sides reiterate their intention to continue comprehensive long-term international cooperation to combat terrorism and to address other new challenges and threats, acting on the basis of international law under the UN auspices as well as within other relevant international organizations of which India and Russia are members. They oppose double standards in combating this phenomenon. They will cooperate to implement the United Nations Global Counter-Terrorism Strategy and to ensure an early entry into force of the International Convention for the Suppression of Acts of Nuclear Terrorism. Both Sides affirm their strong interest in promptly reaching an agreement on the draft Comprehensive Convention against International Terrorism submitted by India.

20. The Sides note with concern the risk posed by the spread of terrorist ideologies and express their determination to counter this threat basing these efforts on UN SC resolution 1624, including through enhancing, in every possible way, dialogue among civilizations and cultures.

21. The Sides are interested in strengthening bilateral and multilateral interaction in Central Asia, which would contribute to enhanced stability and security in the region, including through closer and mutually beneficial cooperation with individual countries in the region based on shared interests and mutual respect. India and Russia advocate the development of practical cooperation among all partner countries of the Shanghai Cooperation Organization.

22. The Sides are concerned about the continuing deterioration of the situation in Afghanistan and the growing terrorist threat posed by the Taliban and other extremist forces.

India and Russia will continue to participate in the post-war recovery in Afghanistan and are interested in strengthening its statehood and in the reemergence of that country as a peaceful, democratic, independent and prosperous state.

23. The Sides are convinced that an effective solution to the Iranian nuclear issue is best found through political and diplomatic efforts. In this regard the unanimous adoption of the UN Security Council Resolution 1737 is significant. It underscores the need for more active and transparent cooperation of Iran with the IAEA in order to resolve outstanding verification issues. They agreed that implementation of the Resolution should facilitate resumption of negotiations for a long-term comprehensive agreement which would allow for the development of relations and cooperation with Iran based on mutual respect and the establishment of international confidence in the exclusively peaceful nature of Iran's nuclear programme.

24. The Sides call for ensuring peace and security on the Korean Peninsula, maintaining it free from nuclear weapons and addressing the nuclear problem through the six-party talks based on the Joint Statement of September 19, 2005.

25. The Sides reaffirm their commitment to securing a comprehensive, lasting and just settlement of the Arab-Israeli conflict on a firm international legal basis, i.e. relevant UNSC resolutions, the Madrid Principles and the Road Map. They also support the Arab Peace Initiative, adopted in Beirut in 2002. They condemn violence by all sides and call for negotiated solutions. They advocate the active support of the international community, the Quartet and regional players for efforts aimed at normalizing the situation in West Asia and Middle East, and resuming dialogue on all tracks; the Palestinian, the Lebanese and the Syrian, for comprehensive and durable peace in the region.

26. The Sides express concern over the continuing deterioration of the situation in Iraq. They believe that a return to peace, stability and progress in Iraq can only be achieved through reconciliation and a broad internal dialogue between all ethnic and religious groups and political forces of the country. India and Russia believe that the developments in Iraq indicate the need for collective international efforts aimed towards an early normalization of the situation

in the country.

27. The Sides call for expansion of cooperation within the China-Russia-India trilateral format. The first trilateral summit-level meeting, which took place in July 2006 in the outreach format of the G8 events in St. Petersburg, gave a fresh impetus to enhancing multifaceted interaction among the three states. The trilateral interaction promotes the development of mutually beneficial economic cooperation among India, Russia and China, enhances international accord in the field of countering new challenges and threats, especially in the fight against terrorism, and contributes to strengthening peace and stability in Asia and

throughout the world.

28. The Sides reaffirm their strong commitment to strengthening their relations in every possible way, and express their conviction that the strategic partnership contributes to the development of mutually beneficial and comprehensive bilateral cooperation, and serves the cause of peace, security, stability and sustainable development at the regional and global levels.

29. The President of the Russian Federation invited the Prime Minister of the Republic of India to visit Russia at a mutually convenient time for the next annual Summit. The invitation was gladly accepted.

B. JOINT STATEMENT BY THE PRIME MINISTER OF THE REPUBLIC OF INDIA AND THE PRESIDENT OF THE RUSSIA FEDERATION ON COOPERATION IN THE FIELD OF PEACEFUL USES OF ATOMIC ENERGY.

India and Russia, reaffirm the importance of their strategic partnership which serves their national interests, strengthens bilateral relations and contributes to international peace and security and highlight the importance of mutually beneficial cooperation and shared objectives in the field of nuclear energy.

India and Russia, as states possessing advanced nuclear technologies, recognize that nuclear energy provides a safe, environmental friendly and sustainable source of energy. They underline the need to further develop international cooperation in promoting the use of nuclear energy for peaceful purposes in accordance with their respective international commitments and national legislations. They believe that nuclear energy will provide an indispensable source of energy to future generations. India and Russia as responsible states share an objective of ensuring non-proliferation of weapons of mass destruction and their means of delivery including possible linkages with terrorism.

India and Russia resolve to further emphasize their willingness to expand and strengthen their scientific and other exchanges and bilateral dialogue on peaceful uses of nuclear energy.

India and Russia note with satisfaction their ongoing cooperation in construction of nuclear power plants at Kudankulam. India and Russia reaffirm their commitment to work together to expand civil nuclear energy cooperation, with a

special emphasis on nuclear power generation aimed at enabling India to realize its goals of promoting nuclear power and achieving energy security in a self sustaining manner. With the objective to implement these intentions, an agreement between the Government of the Republic of India and the Government of the Russian Federation will be signed on cooperation in the construction of 4 additional power units at Kudankulam. (This understanding was reflected in the Memorandum of Intent dated 25.01.2007.)

India undertakes that the reactor facilities and nuclear fuel supplied by Russia shall remain under the IAEA safeguards during the entire period of their actual use in accordance with the agreement on safeguards, which shall be concluded between the Republic of India and the IAEA. It will also inter alia take into account measures relating to physical protection and other issues as may be mutually agreed. Russia will continue to work with the Participating Governments of NSG in order to create conditions through amendment to its guidelines to facilitate expansion of civilian nuclear energy cooperation with India.

India and Russia recognize the importance of R&D for development of innovative technologies which reduce the risk of nuclear proliferation to further facilitate the wide scale development of nuclear energy. International project for nuclear reactors and fuel cycles

(INPRO) which is being implemented under the aegis of IAEA with the participation of India and Russia is an example of productive international cooperation. India and Russia express their willingness to further expand and strengthen their bilateral civilian nuclear energy cooperation by broadbasing cooperation covering both power (fission and fusion energy) and non-power

applications in areas of mutual interest to be identified by both sides.

The Department of Atomic Energy, India and the Federal Atomic Energy Agency, the Russian Federation will work out in 2007 a comprehensive programme of cooperation in the field of peaceful uses of atomic energy between India and Russia.

C. LIST OF AGREEMENTS SIGNED BETWEEN THE REPUBLIC OF INDIA AND THE RUSSIAN FEDERATION DURING THE OFFICIAL VISIT OF H.E. MR VLADIMIR V PUTIN, PRESIDENT OF THE RUSSIAN FEDERATION TO INDIA, JANUARY 25-26, 2007

1. Joint Statement on the Outcome of the Official Visit of H.E. Vladimir V. Putin, President of the Russian Federation to the Republic of India.
Signed by H.E. Dr. Manmohan Singh, Prime Minister of the Republic of India and H.E. Mr. Vladimir Putin, President of the Russian Federation.
2. Programme of Cultural Exchanges between the Government of the Republic of India and the Government of the Russian Federation for the Years 2007-09.
Signed by H.E. Smt. Ambika Soni, Minister of Culture and Tourism of India and H.E. Mr. Alexander Sokolov, Minister of Culture and Mass Communication of the Russian Federation.
3. Protocol between the Government of the Republic of India and the Government of the Russian Federation on holding "Year of Russia in India" in the Year 2008 and "Year of India in Russia" in the Year 2009.
Signed by H.E. Shri Karan Singh, President, Indian Council for Cultural Relations and H.E. Mr. Alexander Sokolov, Minister of Culture and Mass Communications of the Russian Federation
4. Memorandum of Intent between the Department of Atomic Energy, the Government of the Republic of India and Federal Atomic Energy Agency, the Russian Federation on development of cooperation in the construction of additional nuclear power plant units at Kudankulam site as well as in the construction of Russian design nuclear power plants at new sites in the Republic of India.
Signed by Dr. Anil Kakodkar, Secretary
5. Agreement between the Government of the Republic of India and the Government of the Russian Federation on the access of the Indian Party to navigation signals of the Russian Global Navigation Satellite System GLONASS for peaceful purposes.
Signed by Shri G. Madhavan Nair, Chairman, Indian Space Research Organization and Mr. Anatoly Perminov, Director, Federal Space Agency of the Russian Federation
6. Agreement between the Government of the Republic of India and the Government of the Russian Federation on access of the Indian Party to a part of the Russian Global Navigation Satellite System GLONASS Radio Frequency Spectrum.
Signed by Shri G. Madhavan Nair, Chairman, Indian Space Research Organization and Mr. Anatoly Perminov, Director, Federal Space Agency of the Russian Federation
7. Agreement between the Indian Space Research Organization and the Federal Space Agency on cooperation in the joint satellite project 'YOUTHSAT'.
Signed by Shri G. Madhavan Nair, Chairman, Indian Space Research Organization and Mr. Anatoly Perminov, Director, Federal Space Agency of the Russian Federation
8. Protocol between the Central Board of Excise and Customs (Republic of India) and the Federal Customs Service (Russian Federation) on exchange of information on the movement of goods and conveyances
Department of Atomic Energy and Mr. Sergey Kirienko, Director Federal Atomic Energy Agency of Russia.

between the Republic of India and the Russian Federation.

Signed by Shri V.P. Singh, Chairman, Central Board of Excise and Customs and Mr. Andrey Belyaninon, Head, Federal Customs Service.

9. Cooperation Agreement between Saraf Agency Private Limited Vneshekonon Bank of Russia and Joint Stock Company

Technochim Holding

Signed by Shri Rahul Saraf, Director, Saraf Agency Private Limited, Mr. Alexander Dmitriev, Chairman, Vneshekonon Bank.

[Sources:-

I. <http://pib.nic.in/release/release.asp?relid=24369>

II. <http://pib.nic.in/release/release.asp?relid=24368>

III. <http://pib.nic.in/release/release.asp?relid=24370>]

Appeal to the Japanese Government

“Oppose lifting Nuclear Suppliers Group restrictions on nuclear trade with India”

We appeal to the Japanese government to resolutely oppose lifting Nuclear Suppliers Group (NSG) restrictions on nuclear trade with India for the following reasons:

1. In defiance of the global yearning for nuclear disarmament, India produced and tested nuclear weapons. Hitherto, India has followed its own path, pointing to the lack of effort towards nuclear disarmament on the part of the nuclear weapons states and to the inequality of the Non-Proliferation Treaty (NPT). However, as far as the international non-proliferation regime is concerned, there is no alternative to the NPT.
2. The proposed deal could send a dangerous message to other nuclear proliferators. Pakistan is already demanding the same treatment as India, while North Korea, Iran and other countries will conclude that if they once acquire nuclear weapons, eventually their possession of these weapons will gain international acceptance.
3. India is not a party to the NPT and it has not signed the Comprehensive Test Ban Treaty (CTBT). Furthermore, it has not joined the fissile material production moratorium and it has not played a constructive role in negotiations for a Fissile Material Cut-off Treaty (FMCT). For its part, the US has not ratified the CTBT and it too has not played a constructive role in FMCT negotiations. The House legislation promotes a moratorium on the production of fissile material and the implementation of the FMCT as US policy. However, it lacks
- binding force on these points. The Japanese government calls for the speedy implementation of the CTBT and the FMCT and the universal application of the NPT, but the existing circumstances in regard to these treaties are unlikely to change under the proposed deal.
4. Under the proposed deal, India will accept safeguards on some of its nuclear facilities, but many nuclear facilities will be declared “military” and thus remain outside the scope of these safeguards. India’s fast breeder reactors, uranium enrichment facilities and reprocessing facilities, which are of particular significance for nuclear proliferation, will not be covered by safeguards. It will therefore remain possible to produce fissile material and nuclear weapons at these facilities.
5. The possible supply of nuclear fuel to India would, in fact, add to its nuclear weapons capabilities by freeing-up its existing and limited domestic capacity to produce highly enriched uranium and plutonium exclusively for weapons.
6. The devastation which resulted from the bombing of Hiroshima and Nagasaki gave Japan a deep insight into the inhumanity of nuclear weapons. This insight, gained through great suffering, confers upon Japan a special duty to work for non-proliferation and nuclear disarmament. Japan must not stand idly by when the principles of non-proliferation and nuclear disarmament are trampled upon with such contempt.

6 September 2006

Signatory Groups

Signed by the 48 groups including the following:

- Citizens' Nuclear Information Center
- Chernobyl Children's Fund, Japan
- Consumers Union of Japan
- Depleted Uranium Center Japan
- Femin Women's Democratic Club
- Global Peace Campaign
- Green Action
- Greenpeace Japan
- Harmonics Life Center
- Humankind Survival Research Society
- Institute for Sustainable Energy Policies
- Japan Congress Against A- and H-Bombs
- Japan Council against A- and H-Bombs
- Japan Confederation of A- and H-Bomb Sufferers Organizations
- National Christian Council In Japan, Peace and Nuclear Issues Committee
- No Nukes Asia Forum Japan
- Peace Boat
- Stop the Monju Tokyo
- YWCA of Japan

(Groups with no English name not included on this list.)

Background

On July 26, 2006 the U.S. House of Representatives passed legislation to exempt a proposed nuclear cooperation agreement with India from existing nuclear trade restrictions. The Senate is likely to pass similar legislation this Autumn. Before the nuclear cooperation agreement can become effective, the House legislation requires that the final text be submitted to Congress for approval.

The House legislation is a major step towards implementation of a July 18, 2005 joint statement by President Bush and Prime Minister Singh, in which President Bush promised to work to lift US and international restrictions on nuclear trade with India.

Since India does not have comprehensive International Atomic Energy Agency (IAEA) safeguards covering all its nuclear activities and facilities, nuclear trade with India requires exemption from the U.S. Atomic Energy Act of 1954 and also from the rules of the Nuclear Suppliers Group of countries (NSG). The House legislation provides exemption from the Atomic Energy Act subject to various conditions. One

of the conditions is that the NSG must decide by consensus to permit supply to India of nuclear items covered by the guidelines of the NSG. That means lifting NSG restrictions on nuclear trade with India.

In order to be eligible for the exemption, the legislation also requires India to adopt certain nonproliferation measures. However, these measures fail to meet minimum nonproliferation standards. As shown in the following quote, the proposed agreement will, in fact, do great damage to the nonproliferation regime.

Twelve nuclear experts summed up the deal as follows in a letter to IAEA Director Mahomed ElBaradei:

“...the deal threatens to undermine the nonproliferation regime by granting India the benefits of civil nuclear commerce, while securing no meaningful constraint on the growth of India's nuclear weapons stockpile or requiring India to accept the equivalent of the nonproliferation obligations of Articles I and VI of the nuclear Nonproliferation Treaty (NPT).”¹

Two Indian and two Pakistani nuclear experts found that “the Bush-Singh proposal...would allow India not only to continue but also potentially to accelerate the buildup of its stockpile of weapons materials.”² They concluded that “the deal will enable India, should it choose to do so, to grow its stocks of weapons grade plutonium from the present rate of about 7 weapons worth a year to about 40-50 weapons worth a year.” By giving India access to nuclear fuel from overseas, the proposed agreement will free up India's own limited supplies for use in nuclear weapons.

The legislation requires India to provide the U.S. and the IAEA with a credible plan to separate civil and military nuclear facilities, materials, and programs and to conclude a safeguards agreement with the IAEA. However, many key nuclear facilities will not be subject to safeguards.

Of India's 22 existing and under construction nuclear power reactors, it is proposed that only 14 will be subject to safeguards. However, 4 of India's existing reactors and 2 reactors which are under construction are from overseas and their supply was conditional upon the application of safeguards anyway. Hence safeguards will be applied to only 50% (8 out of

16) of India's indigenous reactors. India's plutonium producing military reactors and its fast breeder reactors will not be subject to safeguards. Its uranium enrichment and reprocessing facilities will also be exempt. Finally, India will retain the right to determine which future nuclear facilities it builds will be civilian and open to safeguards and which will not.

Clearly such a safeguards agreement will not prevent India from increasing its stock of nuclear weapons. Rather, it will enable India to continue to expand its supplies of unsafeguarded nuclear weapons material.

The other conditions that the House legislation imposes on India rely on subjective judgments, which will be made on the basis of the prevailing political circumstances. It can be expected that India's support for US geopolitical objectives in regard to Iran, Iraq and China, as well as its war against terror, will be prioritized over non-proliferation issues.

Japan's Influence as a Member of the Nuclear Suppliers Group

The Bush-Singh joint statement and the legislation being considered in Congress show a careless disregard for the NPT. They are likely to great damage to the international nonproliferation regime. Fortunately, there is still a chance for more

prudent countries to influence the outcome.

The NSG must decide whether to permit nuclear trade with India. So far Japan has not indicated that it supports the US on this issue. Since NSG decisions are made by consensus, Japan's voice on the NSG carries great weight. Furthermore, if Japan takes a stand, other countries will be encouraged to follow Japan's example.

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[Source: <http://cnic.jp/english/news/newsflash/2006/indians6Sep06.html>]

Membership Form

Annual Membership Fee: Students Rs. 20,
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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.

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