

# NUCLEAR MONITOR

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## Editorial

Dear readers of the WISE/NIRS Nuclear Monitor,

In this issue of the Monitor, Judith Taylor from EarthLife writes about the South African government's plans for nuclear power and the legacy of previous uranium mines. Patricia Lorenz, nuclear campaigner with Friends of the Earth, writes about the controversy over EU state subsidies for nuclear power. Doug Weir from the International Coalition to Ban Uranium Weapons writes about the health effects of DU in Iraq.

We also have articles about the widespread public and political opposition to nuclear power in Taiwan; a surprising backdown by the Chinese government in the face of public opposition to a nuclear fuel production plant; and debates in the US concerning nuclear export agreements and weapons-sensitive nuclear technologies.

Feel free to contact us if there are issues you would like to see covered in the Nuclear Monitor.

Regards from the editorial team.  
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## The impact of nuclear in South Africa

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There can be no more significant time to be writing this than today, 18 August 2013.

**766.4326** Yesterday, our National Nuclear Regulator (NNR) announced its approval for two smelters to be constructed at Pelindaba by the Nuclear Energy Company of South Africa (NECSA). These smelters are to be used to smelt the 14,000 tonnes of radioactive metal held on the site. They have also given the approval for cold commissioning. This is despite the very strong case put forward at the public hearing last year for not allowing the facility to be built. NECSA did not put forward a strong case, as they were unable to even put forward the cost of building the facility.

Our legacy of Acid Mine Water has moved beyond dangerous to critical

with the water to be treated to remove the heavy metals but not the sulphates before release into our major waterways – the Vaal-Orange system and the Crocodile-Limpopo. This additional pollution burden will add to that of sewage, industrial and agricultural pollutants already compromising the rivers in South Africa. The cost to the Water Boards in cleaning this water to potable will consequently be severely increased. Impacts on the ecosystems and human and animal health are being ignored. The Department of Health refuses to act and the Departments of Water and the Environment refuse to regulate.

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South Africa's Chernobyl situation, around Krugersdorp, Randfontein, Soweto and right out to KwaThema near Brakpan, continues to endanger the lives of all the inhabitants of the area. Radioactivity levels in many areas reflect those at Chernobyl. The only difference is that there are people living in those areas with infants as well. The legacy of over 125 years of mining, polluted rivers and streams plus tonnes of tailings containing arsenic, uranium, cadmium amongst other heavy metals, continues to stand unrectified and abandoned.

Many of the original mining companies have closed down or left the country (Anglo American being a case in point). As result, the Chamber of Mines refuses to entertain any liability for rectification, leaving the tax-payers to foot the bill. The affected communities pay the penalty of increasingly bad health as the polluted air is breathed in and the polluted water is drunk and used to water vegetables, which absorb the heavy metals. The vegetables are then eaten, further compromising the health of the consumers.

On top of this, we have the proposed rollout of another six nuclear power plants along the southern coast of the country. The European Union has promised funding for this (see [www.info.gov.za/speech/DynamicAction?pageid=461&tid=113400](http://www.info.gov.za/speech/DynamicAction?pageid=461&tid=113400)) and Russia has also put a strong proposal on the table (see [www.bizcommunity.com/Article/196/494/98165.html](http://www.bizcommunity.com/Article/196/494/98165.html)). The focus is on job creation and is highly favoured by the government. The fact that

Flamenville and Olkiluoto are yet to be completed, are heavily over budget and the latter has employed mainly Polish workers, seems to have been overlooked completely.

The first site favoured for the new nuclear power station is Thyspunt near Port Elizabeth. This is an area where commercial calamari farming has been developed very successfully. Twenty thousand people are employed in this export income generating industry. However, calamari are temperamental and changes in water temperature could prevent them from continuing to breed, resulting in the loss of jobs. The building of the reactor is expected to create a mere 1186 jobs over 11 years. This does not seem like a viable project if even 5,000 jobs are lost in the calamari farming, which is predicted.

In addition, evacuation is compromised by there being only one road in and out of the area. This resembles the already existing situations at both Koeberg and Pelindaba, where evacuation in the case of an emergency would be extremely difficult. It is acknowledged that, at Koeberg, Eskom has no idea of how many people are in the area. An emergency evacuation plan is not on Koeberg's website and most of the people in the area are not aware of emergency planning, as emergency exercises are not communicated to them. In the case of Pelindaba, some of the affected community would have to go past the reactor in order to evacuate in the case of an emergency. This raises concerns about whether the NNR is truly regulating the nuclear

industry and ensuring that the public is properly protected.

Whilst emergency exercises are held at both installations and the Public Safety Information Forums meet four times a year to report back to the affected parties, we are concerned that these exercises do not score well and errors are given too much time to be remediated. In addition, neither site has ever been subjected to a full Environmental Impact Assessment, as they went into production prior to this being a requirement. This gives environmentalists considerable problems, as we cannot obtain a comprehensive report on the state of the areas and the impacts.

In January this year, all the environmental NGOs and affected parties met in Cape Town to form an alliance to campaign against Nuclear 1, as the project is called. This Alliance is known as Tsunami and has had a further meeting, although most communication is via email. A third meeting is pending. Furthermore, we are alert to the fact that nuclear power is now the most expensive way to generate electricity with coal power second. In a country with the amount of sunlight and wind available to power sustainable solutions, we feel very strongly that this should be the direction in which South Africa should be moving. The lower costs of the latter solutions should also be a valid reason to let go of nuclear and coal enabling South Africa to move into the future and improve the health of our communities.

## Buying a future for nuclear – EU commission proposes new state aid for new nuclear

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Since Spring the EU Commission has been preparing a review for state aid rules, and in Summer a leaked draft caused a shock, mainly in German speaking media.

**766.4327** The governments of Austria and Germany made clear they are opposed to state aid proposals, but only Austria handed over a statement of opposition. Denmark took a negative stance at the energy summit in May,

and German Chancellor Merkel is clearly against it – at least in German media, at least before elections on September 22.

Under EU law state aid is forbidden, unless allowed according to a very

complex system. One exemption from the ban on state aid is based on environmental protection in the EU Treaty. This made the so-called block exemption for renewables possible, when different national systems

introduced the new technologies for producing energy using wind or sun as fuel into the market. The current plan for the new environmental and energy guidelines for 2014–2020 constitutes a major change by introducing a technology-neutral approach, based on carbon only and recognising nuclear alongside renewables as a viable solution to climate change. A change of those rules – which was pushed forward mainly by UK, Czech Republic and France – would have very practical implications.

The experience of past years has proved that nuclear power plants cannot be built without subsidies. This is now acknowledged by those states who called for the freest of all markets – in the UK this is nuclear power project Hinkley Point C and Temelin in the Czech Republic and all other potential plants which might be under consideration (Poland, Hungary).

The Czech nuclear power project Temelin 34 is directly depending on the possibility of direct subsidies. After years of hammering that nuclear is cheap and will be only market based and without any public subsidies, the strategy changed. For the past months the two-third state-owned utility CEZ is officially in negotiations to find a way the Czech government will guarantee fixed feed-in tariffs for

the new units “at least for a while after operation started” as they like to add. In numbers this is 30 years, the model being copied from the UK, the strike price model, which is currently under negotiation between EDF and the UK government.

The current review of the guidelines for environmental and energy state aid is a precondition, because the EU Commission has to agree to this extreme form of state aid consisting of a guaranteed minimum feed-in price for nuclear for 30–40 years. Energy Commissioner Oettinger calling this idea “Soviet” says it all.

While the EU Commission is hiding behind the fact that the paper leaked is only a draft and up for discussion, a look at the draft itself shows that it is clearly pro subsidy of nuclear and obviously added the EURATOM Treaty (compared to earlier drafts) as an argument: *“Insofar as these Guidelines set out rules on state aid for nuclear, the assessment under the TFEU will take due account the objectives of the Euratom Treaty. ...6.2 Aid to nuclear energy: (157) Pursuing the development of nuclear energy, in particular by facilitating investment in nuclear energy, is an objective covered under Article 2(c) of the Euratom Treaty and therefore the Commission does not question that such support*

*measures are aimed at a common EU objective.”*

### Timing and Action

GLOBAL 2000 / FoE Austria will start the following activities via the relaunched campaign site [www.my-voice.eu](http://www.my-voice.eu) in early September: A petition open for signatures by citizens emailed to all EU Commissioners, because it is them who decide and only them. Not only the networks usually involved, but a much broader involvement of political players is under preparation. As soon as DG Competition starts the last consultation on this review – not earlier than September 22 because Germany obviously asked to have it postponed until after national elections – we will inform about the start and provide a statement people can send as a contribution against the EU plan of giving nuclear a lifeline via state funding. The [www.my-voice.eu](http://www.my-voice.eu) website will be regularly updated with press releases and key info. A new legal analysis on state aid for nuclear will be published in September and in November the phase-out nuclear power in Europe study. Though the new guidelines should be in force by 1 January 2014, most likely the decision will not be taken by the EU Commissioners until next year.

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## Birth defects: did the occupation of Iraq leave a toxic legacy?

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During the occupation of Iraq, the city of Fallujah bore witness to some of the most intense US combat operations since Vietnam, with 2004's Operation Phantom Fury widely condemned for its ferocity and disregard for international law.[1]

**766.4328** Paediatrician Dr Samira Al'aani has worked in the city since 1997.[2] In 2006 she began to notice an increase in the number of babies being born with congenital birth defects (CBD). Concerned, she began to log the cases that she saw. Through careful record keeping she has determined that at Fallujah General Hospital, 144 babies are now born with

a deformity for every 1000 live births. This is nearly six times higher than the average rate in the UK between 2006 and 2010, and one strong suspicion is that contamination from the toxic constituents of munitions used by occupying forces could be the cause. Now a new nationwide study by the Iraqi Ministry of Health, in collaboration with the World Health Organisation,

has the potential to catalyse efforts to understand and confront the issue, but only if science can be allowed to rise above politics.

The politicisation of health research in Iraq has deep roots. In April 2001, plans were beginning to be put in place for a framework agreement between the WHO and Iraqi government that was intended to establish projects aimed at improving public health care in the country.[3] Among the projects were plans to improve the recording and registration of cancers and con-

genital malformations, and efforts to identify substances in the environment that might be responsible for the increases in those diseases reported since the 1991 Gulf War. Controversially for some states, depleted uranium from US and UK munitions was among the environmental risk factors to be investigated.

After six months, the plans were in disarray. While Baghdad had initiated the project, after consultation the WHO had announced that any costs associated with the projects would need to be borne by Iraq itself. "None of these projects can really start until funding has been found for them, and funding, it has been agreed, will be at the Iraqi initiative," said Neel Mani, incoming director of the WHO's Iraq programme at the time.[4] The Iraqi government, convinced that the health problems had been caused by the 1991 Gulf War and were thus the fault of the US and its allies, refused to cooperate. Political concerns had trumped the needs of the Iraqi people.

The United States has long been the WHO's largest single state donor and the institution has not been free of the criticism directed at other international bodies, such as the World Bank, in recent years that it is disproportionately influenced by its largest patron. The reality is that vast sums of money are involved and state donors have been keen to see returns that are consistent with their interests and principles, whether this is protection of Big Pharma's intellectual property rights or promoting neoliberal approaches to health care provision. Yet in order to be effective the WHO must be, and be seen to be, genuinely independent. The WHO's governing body, the World Health Assembly, reopened the issue of reform back in 2009 but progress has been slow, particularly as different parties are pushing the reform agenda in different directions.

When the WHO announced in 2011 that it was to work with Iraq's Health Ministry on a nationwide study to assess the rates and geographic spread of CBDs in the country, optimism began to build that this could be a significant first step in the long path towards reducing harm and providing assistance to affected families.[5] Prior

to the announcement, studies into rates had been limited in scope to a single hospital, and questions were raised about their methodology. Taken in isolation these studies were insufficient to generate the political will for action. Additionally, concerns were expressed over Iraq's internal bureaucracy and power struggles after researchers reported that medical staff were being pressured into not speaking out. Gradually, hopes began to fade that effective research would ever see the light of day.

From the outset, phase one of the project was never due to consider causality – a fact that has drawn criticism from some quarters. Its original aim was to gather baseline data from selected districts and analyse spatial and temporal trends in the incidence of CBDs. Progress on the project was slow, with data collection hit by repeated delays, but during 2012 the WHO, which had posted a FAQ on the project in response to growing interest from the public and media, announced that: "The data collection process has been recently completed and the results are being analysed by the Ministry of Health and WHO. The data analysis process will conclude at the end of 2012 following which time the report writing process will start." [6]

The FAQ was notable in that it pre-empted questions on causality. Of these the possible link between depleted uranium use and CBD rates was covered; the tone was exasperated: "Is the study looking at a possible link between prevalence of child birth defects and the use of depleted uranium? No, absolutely not. The study is only looking at the prevalence of congenital birth defects in selected governorates."

This was understandable, the term birth defect covers a diverse spectrum of disorders; causes include single gene defects, chromosomal disorders, multi-factorial inheritance, environmental teratogens, maternal infections such as rubella and micronutrient deficiencies. Amidst the wreckage of post-war Iraq, there was no shortage of potential risk factors.

In March 2013, BBC World broadcast a documentary on the story. As with other media reports, Born Under A

Bad Sign visited the hospitals and spoke with parents and doctors – all of whom were convinced that the health problems they were witnessing were linked to the war.[7] Journalist Yalda Hakim took this up with staff from the Ministry of Health and was able to discuss the CBD data with them. Although nervous, and reluctant to provide too many answers, citing political pressure, they confirmed that the study would find a link between increased incidence of CBDs and areas subject to the most intense fighting in 2003.[8]

If true, this is a hugely significant and profoundly political outcome, and while it doesn't identify a single causal factor for the increase in CBD rates, it narrows the field considerably. While the long-term impact of explosive remnants of war such as landmines and cluster bombs are familiar to most, questions are increasingly being asked about the public health legacy of toxic remnants of war.[9] While the two most notorious examples are depleted uranium and the dioxin contaminated Vietnam-era herbicide Agent Orange, an analysis of commonly used military substances – from heavy metals to explosives – demonstrates significant potential for harm from a range of materials.

Unfortunately data on the toxicity, environmental behaviour and dispersal of these substances is limited as militaries have often only undertaken research into the effects on their own troops or when faced by domestic regulations over emissions from firing ranges. This lack of data and the unpredictability of conflict means that accurately predicting the risk to civilians is enormously challenging. That no system of comprehensive post-conflict environmental assessment exists will ensure that many of these data gaps will remain.

Broadcast of the BBC report in March was followed by updates to the WHO's FAQ. Gone was the petulant 'No, absolutely not' from the line on depleted uranium and the first of a series of procedural delays was announced as committees were formed and new analyses proposed.[10] For campaigners seeking disclosure of the data as a first step towards focused research and humanitarian assistance in Iraq, the

delays were worrying. By July, further delays were announced, with the WHO's FAQ stating: "It was established that this large data set has a great deal of potentially valuable information and that additional analyses not originally conceived of should be done."<sup>[11]</sup> The WHO added that: "... in addition to further analyses, it was determined the work should also undergo the scientific standard of peer review. A team of independent scientists is now being recruited to review the planned analyses."

The political ramifications of the study are obvious and, while the alterations

to the project may be scientifically justified on the basis of the dataset, it was felt that the best way to ensure confidence in the findings was to call for the study and analyses to be subject to genuinely independent and transparent peer review in an open-access journal. The WHO has used open-access journals in the past so the request is not without precedent. Crucially, any experts involved would be selected independently of the WHO.

So how can civil society and individuals influence an organisation as monolithic and apparently compromised as the WHO? On July 31, Dr Al'aani

launched an online petition through Change.org ([www.change.org/act4iraq](http://www.change.org/act4iraq)) – with the associated twitter hashtag of #Act4Iraq) calling for the WHO to immediately publish the collected data for independent peer review, so that scientific conclusions can be drawn and the affected parents can finally understand what has happened to their children.<sup>[12]</sup> For them, and for Dr Al'aani, the unfolding health crisis concerns far, far more than a debate over numbers and statistics. For those of us who are citizens of the states that invaded Iraq, it is vital to understand whether we carry a share of responsibility for those parents' suffering, and to demonstrate to Iraqis that the world has not forgotten about their country.

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## Sensitive nuclear technologies and US nuclear export agreements

US business groups are lobbying the US government to limit the negotiation of bilateral nuclear trade agreements (known as section 123 agreements under the 1954 Atomic Energy Act <sup>[1]</sup>) containing clauses banning the development of sensitive nuclear technologies (SNT) – uranium enrichment and nuclear reprocessing. SNT can be used to produce fissile material for nuclear weapons – highly enriched uranium or plutonium

**766.4329** The United Arab Emirates agreed not develop SNT as part of its 2009 agreement with the US.<sup>[2]</sup> However the agreement does prohibit the stockpiling of plutonium separated from spent fuel produced in reactors in the UAE and separated in another country – just as Japan stockpiles plutonium separated from spent fuel

in European reprocessing plants. Moreover the agreement reportedly contains an escape clause that allows the UAE to exercise any more favourable terms that the US grants other Middle Eastern nations in subsequent nuclear trade pacts. The Obama administration dubbed the UAE agreement the "gold standard" for

future agreements around the world. There has been an ongoing debate as to whether the "gold standard" SNT ban should be a condition of all future US nuclear agreements or whether it should be considered on a case-by-case basis.

The Obama administration is currently undertaking its third successive internal review of the matter.<sup>[3]</sup> Some have suggested a compromise – US negotiators would seek an SNT ban in all or almost all agreements unless both the Secretary of State and the Energy Secretary agree to waive the requirement.

There has also been discussion of a regional approach – for example the US might seek SNT bans in the Middle East but put Asia in the too-hard basket.

US business groups are fighting initiatives to limit the spread of SNT. In July, the Nuclear Energy Institute, the National Association of Manufacturers and the US Chamber of Commerce called on the Obama administration to expedite conclusion of bilateral agreements and to adopt a “pragmatic” approach to SNT.[4]

The business groups expressed concern that as well as losing out on business opportunities to competitors who do not impose the same restrictions, the US is also at risk of losing influence on nuclear security and non-proliferation on the global stage. The second argument is disingenuous – effectively the business groups are saying the government ought to permit the spread of SNT so the US is better placed to limit the spread of SNT.

That disingenuous argument was the basis of an April 25 joint letter to the Obama administration by former deputy Defense secretary John Hamre, former national security advisers Brent Scowcroft and James Jones, former Defense secretaries James Schlesinger and William Cohen, and retired Adm. Michael Mullen, previously chairman of the Joint Chiefs of Staff.[5] They argue against tightening restrictions because the “U.S. civil nuclear industry is one of [Washington’s] most powerful tools for advancing its nuclear nonproliferation agenda. ... Weakening it will merely cede foreign markets to other suppliers less concerned about nonproliferation than the United States.” In other words, spread SNT to help stop the spread of SNT, and spread SNT or other countries less concerned about the spread of SNT will spread SNT.

Henry Sokolski from the Nonproliferation Policy Education Center questioned the letter’s contention that nuclear trade must be a principal vehicle for Washington’s non-proliferation objectives: “You’d think after our wretched experience with civil nuclear programs in Iran, India, Iraq, Pakistan and our past near-calls with Taiwan and South Korea’s programs, this would be the

last thing anyone truly opposed to nuclear weapons proliferation would push.”[5]

Sokolski collaborated with Foreign Policy Initiative head Jamie Fly on a February 2012 letter to Obama, signed by 20 conservative defense experts, recommending an approach stronger than the case-by-case policy then in favour in Washington. The signatories – including former Defense Department policy head Eric Edelman, former national security adviser Steven Hadley and former nuclear nonproliferation envoy Robert Joseph – said: “Rather than abandon efforts to tighten non-proliferation controls on civil nuclear exports, the United States should be leveraging access to our market to encourage French, Russian, and Asian nuclear suppliers to tighten their own rules to meet the nonproliferation gold standard.”[6]

#### Asia

There are indications that Taiwan might agree to an SNT ban as part of a nuclear trade agreement with the US. [7,8] The current US–Taiwan agreement, which does not include an SNT ban, expires next year. Taiwan might sign an agreement without an expiration date, meaning that the SNT ban would be in force indefinitely.

South Korea is effectively a member of the ‘gold standard’ club as the 1992 Joint Declaration of the Denuclearization of the Korean Peninsula prohibits both North and South Korea from possessing enrichment or reprocessing facilities. However North Korea has violated the Declaration, and the situation in north-east Asia is further complicated by Japan’s stockpiling of vast amounts of separated plutonium – a problem which will only worsen if the Rokkasho reprocessing plant proceeds to operation (see Nuclear Monitor #763, ‘Japan’s reprocessing plans’).

The US is pressing South Korea to agree to maintain SNT bans as part of negotiations on the extension of the nuclear agreement. South Korea is unwilling to continue to forego SNT, and deadlocked negotiations have been extended for two years. There is some hope that if Taiwan agrees to an SMT ban, South Korea might be persuaded to do likewise. But even if Taiwan foregoes SNT, two elephants

remain in the room – North Korea and Japan – not to mention the nuclear weapons programs of the US itself and of China.

South Korea’s research into ‘pyroprocessing’ complicates the issue. Pyroprocessing would involve separating short-lived fission products from spent fuel, leaving plutonium mixed with other transuranics (a.k.a. actinides). That is far preferable to conventional reprocessing. On the other hand, proliferators would much prefer to have access to a mix of transuranics (including plutonium) rather than spent fuel, as spent fuel generates much more radioactivity and heat and is therefore much more difficult to handle.

Negotiations on a nuclear trade agreement between the US and Malaysia may commence in coming years but there is no indication as to whether Malaysia would agree to SNT bans. Negotiations on a nuclear trade agreement between the US and Vietnam have commenced, but Vietnam is reportedly unwilling to agree to an SNT ban.[9,10]

#### Middle East

Discussions are ongoing between the US and Saudi Arabia on a nuclear trade agreement.[11] The option of a ban on SNT in Saudi Arabia is under discussion according to US State Department official Thomas Countryman. However Saudi Arabia has expressed unwillingness to forego SNT.

Countryman dismisses concerns that Saudi Arabia might develop nuclear weapons, although members of the ruling family have said they might do just that in response to Iran’s nuclear program.[12] Also of concern is the potential for instability in the kingdom and who might control SNT if the ruling family is overthrown.

Saudi Arabia has signed cooperation pacts with a number of other nations including China, France, South Korea and Argentina.[13] Canadian officials have expressed concerns about the potential for Saudi Arabia to pursue nuclear weapons. “Minimal [International Atomic Energy Agency] safeguards are in place in SA [Saudi Arabia] to verify peaceful uses of nuclear energy ... and it has refused to accept

strengthened safeguards,” officials said in an assessment prepared for Canada’s Foreign Affairs Minister last year. “Many observers question SA’s nuclear intentions, especially if Iran were to acquire a nuclear weapons capability. As a result, SA does not meet Canada’s requirements for nuclear cooperation.”[14]

Countryman said he is “confident that any civil nuclear cooperation we agree would not in any way contribute [to] or encourage” nuclear weapons development in Saudi Arabia, although he surely knows that nuclear exports to Saudi Arabia could indeed contribute to and encourage proliferation. The US National Intelligence Council warned in its 2008 ‘ Global Trends 2025: A Transformed World’ report of the possibility of a nuclear arms race in the Middle East and noted that a number of states in the region “are already thinking about developing or acquiring nuclear technology useful for development of nuclear weaponry.”[15]

The US has also held discussions with Jordan and Syria regarding nuclear

trade in recent years, though the talks have stalled because of political turmoil in the Middle East.[10,12]

Jordan is reportedly unwilling to agree to an SNT ban [16] though there were hints in early 2012 that perhaps Jordan would agree to a ban.[17]

The unfolding saga over US nuclear export policy should be put in context. In particular, it needs to be seen in the context of countless failed multilateral and international proposals over the decades to limit the spread of SNTs, such as the Bush administration’s ‘Global Nuclear Energy Partnership’.[18]

Such proposals fail for various reasons, not least the unwillingness of nuclear have-nots to forego options and technologies that the nuclear haves (weapons states and weapons-capable states) will not renounce. Another complication is Article IV of the Nuclear Non-Proliferation Treaty (NPT), which states: “Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop

research, production and use of nuclear energy for peaceful purposes ... All the Parties to the Treaty undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy.”

Lastly, an article on US nuclear export policy would be incomplete without mention of the tireless – and ultimately successful – efforts of the US under the Bush administration to end the global norm of prohibiting nuclear trade with countries that have not signed the NPT. The 2008 US–India nuclear trade agreement has had a number of unfortunate, predictable outcomes – legitimising nuclear weapons programs and fanning proliferation in South Asia, legitimising China’s supply of reactor technology to Pakistan, undermining and complicating efforts to persuade Iran to forego SNT, etc. The Obama administration has done nothing to undo the damage.

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*(Written by Nuclear Monitor editor Jim Green.)*

# Taiwanese nuclear politics heats up

A parliamentary vote on whether to hold a referendum on the completion of the Lungmen nuclear power plant descended into a brawl between opposing parties on August 2. [1]

**766.4330** The vote, proposed by the ruling Chinese Nationalist Party (Kuomintang – KMT), had been scheduled to decide whether construction of Taiwan's fourth nuclear power plant, which is nearing completion, should continue. Forty politicians from the opposition Democratic Progressive Party (DPP) barricaded themselves inside the legislative chamber on August 1, remaining there overnight in an attempt to stop the August 2 vote taking place.

The brawl broke out as KMT politicians tried to take possession of the podium to allow the vote to proceed. Television footage showed politicians pushing and shoving, two male politicians wrestling on the floor, and bottles and cups of water being thrown at each other. The scuffle led to the session being suspended, without a vote on the referendum taking place.

The DPP is calling for the Lungmen plant to be scrapped without holding a referendum. At least 50% of eligible voters would have to participate in a referendum for it to be binding. Taiwan has never passed a referendum. The 50% participation threshold has not been reached in any of the six referenda held since the Referendum Act came into effect in January 2004, despite those referenda being held in conjunction with national elections in 2004 and 2008. The Taiwan Anti-Nuclear Action League is calling for the Referendum Act to be made less restrictive.

The KMT said it would arrange six shifts, each comprising 15-20 people, to break through the DPP's grip on the podium, but the ruling party later said it would put on hold a motion to allow for a referendum on the nuclear plant. "We will not rule out the possibility of holding another, or third, extraordinary session of the Legislature to deal with the issue," said Lin Hung-chih, KMT Legislator and head of the party's Central Policy Committee. [2]

Around 100 citizens protested against the Lungmen plant inside and outside the parliament on August 2 as the political parties wrestled for control of the podium. [3] Many are associated with the Taiwan Anti-Nuclear Action League, which comprises most of the anti-nuclear civic organizations in the country including the Taiwan Environmental Protection Union, the Humanistic Education Foundation and the Green Citizens' Action Alliance. Other protesters unfurled anti-nuclear banners at 12 major intersections in Taipei.

On the same day, Greenpeace Taiwan warned that in the event of a nuclear accident, none of the subcontractors working on the Lungmen power plant would shoulder any responsibility. At a press conference co-hosted by the Green Citizen's Action Alliance, Greenpeace said that General Electrics and Mitsubishi are indemnified against all responsibility. Senior Greenpeace member Ku Wei-mu said the contractors had no right to ask Taiwanese to trust the safety of nuclear reactors if they themselves were not prepared to accept liability. A Greenpeace report states that in the event of a nuclear accident at the Lungmen plant, the potential economic losses could exceed US\$1.1 trillion per annum. [4]

On July 31, Lin Tsung-yao, a consultant on the Lungmen plant's safety monitoring committee, posted a report detailing a number of construction problems on the project. Lin questioned the quality of GE's structural designs, and said that the project is hampered by the dearth of professionals at the Ministry of Economic Affairs and the Atomic Energy Council who understand the issues and can adequately oversee the project. [5,6,7,8]

Construction began on the two 1350 MW Lungmen reactors in 1999, with the first originally scheduled to enter commercial operation in 2006 and the second in 2007. However, the project has been beset with political, legal and regulatory delays. The DPP halted

construction of the plant when it came to power in 2000.

The DPP is calling for a phase-out of nuclear power, and even the KMT has pledged to make Taiwan nuclear-free by the middle of this century. [9] Six reactors at three plants currently provide about 18% of the country's electricity.

On March 9, anti-nuclear rallies swept across Taiwan ahead of the second anniversary of the Fukushima disaster. According to rally organisers around 200,000 people attended protests nationwide, with 120,000 taking to the streets in Taipei. [10] An opinion poll conducted by the Taipei City Government in March showed that 66% of residents in the capital wanted the Lungmen plant to be scrapped, with just 18% supporting its continuation. [11]

The Fukushima disaster resonated strongly owing to similarities and links between the two countries. Taiwan and Japan both suffer from seismic activity (a 1999 earthquake in Taiwan killed around 2,400 people). Both countries are hit by typhoons – in mid July, a typhoon left Taipower's Chinshan 2 reactor offline and in need of repair. [12]

Taiwan's Shihmen nuclear power plant may have been leaking small amounts of radioactive water for more than three years according to a report published in August by the Control Yuan, a government regulator. [13,14] A Taipower official said the water did not come from the storage pools, but may have come from condensation or water used for cleaning up the floor. The Control Yuan did not accept the explanation and asked Taipower to look into other possible sources of the leak such as spent fuel storage pools. The contaminated water has been collected in a reservoir next to the storage pools.

The Control Yuan said there had been a catalogue of errors, including a lack of a proper plan for how to handle spent nuclear materials and inadequate supervision by the Ministry of Economic Affairs. "The company has yet to clearly establish the reason for the water leak," it said.

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(Written by Nuclear Monitor editor Jim Green.)

# China cancels nuclear fuel centre following protests

The Chinese government has abandoned plans for a huge nuclear fuel centre in Guangdong province.

**766.4331** At a projected cost of US\$7.32 billion, the Heshan Nuclear Power Industry Park was to be equipped with facilities for uranium conversion and enrichment as well as manufacturing of fuel pellets, rods and finished assemblies. It was to be a joint venture between China National Nuclear Corp (CNNC) and China General Nuclear (CGN). The joint venture partners are now looking again at a range of other siting options.**[1,2]**

Land clearing for the project went smoothly. The government sent notices to residents in four villages to relocate and they received compensation within two to three weeks. Villagers were told that the land would be used to build an industrial park. But public concern began to grow and villagers were surprised that the “industrial park” they had been told about was going to process radioactive fuel. On July 12, more than 1,000 protesters descended on the offices of the Heshan city government to oppose the project. Heshan and Jiangmen officials hastily called a press conference and promised to run more TV programs to educate the public.**[3,4]**

On July 13, a notice that the project had been cancelled was posted on the Jiangmen government’s website.

“The people’s government of the city of Heshan has decided to respect the public opinion and will not consider the CNNC Longwan industrial park project,” it said.

On July 14, residents gathered again outside Jiangmen’s government headquarters, worried that the project had merely been postponed, but the city’s Communist Party chief emerged to reassure them that it had indeed been scrapped for good.

Reflecting on the failed project, some government officials blamed old bureaucratic habits for alienating the public. One official pointed to the fact that officials and party committees lacked social media accounts that could have been used to get their side of the story across. Officials probably feared that the protests could escalate to the scale of those provoked by large chemical-factory projects in recent years.

One official said: “The more we explained, the more people believed we were deceiving them.” For example, a Q&A on the local government’s website responded to a question about risks in the event that the plant was bombed during warfare by stating: “Given that it is a civilian nuclear facility, the plant is protected by inter-

national law and could not be attacked during wartime.”**[5]**

*The Economist* reflected on the events: “The government in Beijing would be happy if anti-nuclear protests were to stay at the level of bickering between counties or even the occasional outburst of nimbyism, as in Jiangmen. But there is a risk that the success of Jiangmen residents in securing a change of heart could encourage others. ... As well as complicating China’s nuclear plans, such protests would raise fears in Beijing of something more worrying: an anti-nuclear movement becoming a cover for anti-government activity. Taiwan offers a precedent. In the 1980s opponents of the island’s authoritarian government rallied public support for their cause by tapping into public concerns about nuclear power. The Communist Party does not want to run that kind of risk.”**[6]**

While anti-nuclear activism has been uncommon in China, a nuclear project in Guangxi Province was reportedly halted in February due to public opposition.**[7]**

Anti-nuclear activism is stronger in nearby Hong Kong, where groups including Greenpeace and Friends of the Earth have launched a petition to oppose further expansion of nuclear capacity in Guangdong.**[8]**

“Chinese civil society is getting stronger,” said Willy Wo-Lap Lam, an adjunct professor of history at the

Chinese University of Hong Kong. “People now realize if their numbers are big enough, if they are united and

stand their ground, the government will back down.”

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(Written by Nuclear Monitor editor Jim Green.)

## Nuclear News

### Successful blockade at nuclear weapon base Buchel

On August 11 a group from IKV Pax Christi joined the blockade of the German military base Büchel that hosts US nuclear weapons. Every gate was blocked by non-violent activists from all over the world. Every gate supported the ‘Rhythm Beats Bombs’ message with musical performances. Krista van Velzen, nuclear disarmament campaigner at IKV Pax Christi, said: ‘We join this 24 hour long blockade to show solidarity with the German peace movement. Just as in the Netherlands, Germany hosts 20 American B61 nuclear weapons at the air base. Although the German government said they wanted to send them back, there are still at Büchel, this is the reason why it is necessary to protest. [www.nonukes.nl/en/news/successful-blockade-at-nuclear-weapon-base-buchel](http://www.nonukes.nl/en/news/successful-blockade-at-nuclear-weapon-base-buchel)

### Hiroshima’s Mayor lashes Japan-India atomic courtship

The mayor of Hiroshima, speaking on the 68th anniversary of the nuclear attack on his city, said Japan is wrong to be entertaining prospects of atomic trade with nuclear-armed India. Tokyo and New Delhi agreed in May to pursue arrangements for peaceful nuclear trade. “Even if the nuclear power agreement the Japanese government is negotiating with India promotes their economic relationship, it is likely to hinder nuclear weapons abolition,”

Mayor Kazumi Matsui said. He pressed his country to strengthen ties with the governments pursuing nuclear weapons abolition. Matsui spoke to a crowd of about 50,000 near the location of the 1945 blast, which killed around 140,000 people. [www.nti.rsvp1.com/gsn/article/hiroshima-mayor-lashes-japan-india-atomic-courtship](http://www.nti.rsvp1.com/gsn/article/hiroshima-mayor-lashes-japan-india-atomic-courtship)

### Tokyo exhibition shows harassment against anti-nuclear movement

Anti-nuclear activists held an exhibition in Tokyo on August 10–11 to highlight the harassment and threats they faced during a period long before the Fukushima nuclear disaster. Letters and postcards sent to the activists in the 1990s and early 2000s were displayed. One postcard simply says, “You are a tick.” Some envelopes contained hair, cigarette butts and dead cockroaches. Other letters were filled with obscenities. In 1995, five organisations and 66 individuals asked the Human Rights Protection Committee of the Japan Federation of Bar Associations to take measures against the harassment. By that time, 4,000 of the letters and postcards had been confirmed around the country. Lawyer Yuichi Kaido, one of the organisers of the exhibition, said: “The battle between those supporting the restart of idled nuclear reactors and those against it will be heating up from now

on. The obstruction tactics against the anti-nuclear movement that were seen in the past could occur again.” [http://ajw.asahi.com/article/behind\\_news/social\\_affairs/AJ201308100017](http://ajw.asahi.com/article/behind_news/social_affairs/AJ201308100017)

### Japanese Peace Boat.

The Japanese Peace Boat is travelling around the world with a global call for nuclear weapons abolition through its 6th Global Voyage for a Nuclear-Free World. Eight Hibakusha (atomic bomb survivors) from Hiroshima and Nagasaki, accompanied by a Youth Special Communicator for a Nuclear-Free World, are giving testimonies in more than a dozen ports on their way to arrive back in Japan in October. The Peace Boat will be in Mexico on September 21 for the International Day of Peace (Mexico will host the next humanitarian conference on nuclear weapons in February 2014). Updates are posted at [www.breakingthenuclearchain.org](http://www.breakingthenuclearchain.org) and [www.peaceboat.org](http://www.peaceboat.org)

### World Conference against Atomic and Hydrogen Bombs

The 2013 World Conference against Atomic and Hydrogen Bombs ended successfully on August 9 in Nagasaki with the participation of about 7,000 people including 89 overseas representatives from 20 countries. Conference organisers have historically shied away from debates over nuclear power but that has changed since the

2011 Fukushima disaster. The Declaration of the International Meeting adopted on August 5 in Hiroshima includes the following statement: "The accident at the Fukushima Daiichi Nuclear Power Plant is still in the midst of the crisis. Bringing the situation under control, decommissioning of all nuclear reactors and a fundamental shift to renewable energy resources are keenly called for. Having noted the dangerous relations between

nuclear weapons and nuclear power generation, we call for ending all kind of nuclear damage caused by nuclear fuel cycles, and oppose reprocessing of spent nuclear fuel and accumulation of plutonium, as well as military use of nuclear energy. United in one wish for 'no more nuclear victims,' we will develop our campaign together with the movement to break free of nuclear power." [www.antiatom.org](http://www.antiatom.org)

**Offshore wind could meet EU electricity needs.**

The EU's total electricity usage could be met more than four times over by floating offshore wind farms in the deep waters of the North Sea, according to a new report from the European Wind Energy Association. The report claims that if the right policies are put into place now to spur the development and implementation of next-generation floating turbines, total EU offshore wind capacity could reach 150 gigawatts by the year 2030. [www.ewea.org/report/deep-water](http://www.ewea.org/report/deep-water)

## WISE / NIRS Nuclear Monitor

The World Information Service on Energy (WISE) was founded in 1978 and is based in Amsterdam, the Netherlands.

The Nuclear Information & Resource Service (NIRS) was set up in the same year and is based in Washington D.C., US.

WISE and NIRS joined forces in the year 2000, creating a worldwide network of information and resource centers for citizens and environmental organizations concerned about nuclear power, radioactive waste, proliferation, uranium, and sustainable energy issues.

The WISE / NIRS Nuclear Monitor publishes information in English 20 times a year. The magazine can be obtained both on paper and as an email (pdf format) version. Old issues are (after 2 months) available through the WISE homepage: [www.wiseinternational.org](http://www.wiseinternational.org)

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