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Editorial

Dear readers of the WISE/NIRS Nuclear Monitor,

In this issue of the Monitor, we cover:

- the agreement between the UK government and EDF, a step towards new power reactors at Hinkley Point
- reports on the stagnation of nuclear power (and positive news regarding renewables)
- the latest developments in South Korea's nuclear safety scandal
- excellent work by nuclear disarmament campaigners (and like-minded national governments) which has put nuclear weapons states on the defensive
- nuclear submarine accidents and incidents in the UK, Russia and the US
- the decision by Greenland's parliament to drop the ban on uranium mining
- the EU state aid victory – proposals to facilitate increased state subsidisation of nuclear power programs have been shelved, for the time being at least
- the ongoing controversy over the impacts of depleted uranium in Iraq

The Nuclear News section has reports on nuclear fuel damage in Slovenian reactor and the opening up of Canada's uranium industry to European investment.

The last edition of the Monitor (#770 – water feature) contained two production errors – missing text on pages 8 and 11. The corrected version is posted at www.wiseinternational.org/nuclear-monitors. Apologies for the error.

Feel free to contact us if you have feedback on this issue of the Monitor, or if there are topics you would like to see covered in future issues.

Regards from the editorial team.

Email: monitor@wiseinternational.org

UK nuclear power deal – much ado about nothing?

The UK Government and French utility EDF have reached initial agreement on terms of a proposed contract for the Hinkley Point C (HPC) nuclear power station in Somerset, paving the way for the construction of the first new nuclear plant in the UK since Sizewell B began operation in 1995.

771.4347 Operation of the first of two 1.6 gigawatt (GW) HPC reactors is scheduled to commence in 2023. The government's October 21 announcement says HPC will "begin the process of replacing the existing fleet of nuclear stations, most of which are due to close in the 2020s."^[1]

However the HPC project faces many hurdles and potential delays. The government said the agreement with EDF is not legally binding.^[1] EDF said it will not give the go-ahead for construction until and unless the European Commission clears the government/EDF agreement under state aid rules

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designed to prevent the distortion of Europe's electricity market. EDF said it would make its final investment decision by July 2014, but the European Commission examination may take longer.

Stop Hinkley spokesperson Nikki Clark said the "announcement was much ado over nothing and despite all the fanfare and visits of the rich and famous to Hinkley, there is no legally binding agreement, nor will there be until the government get their plans past the European Commission which, according to various media outlets, would be summer 2014 at the earliest."**[2]**

Labour MP Alan Whitehead said "it's not much of a deal, more a kind of semi crayoned-in statement of intent and a very expensive one at that. ... At the moment there seem to be a lot more things that we don't know than things we do know about this deal." Whitehead notes that in 2009, EDF said it planned to start producing power at Hinkley C in 2017.**[3]** So with the current 2023 start-up date, the project is already six years behind schedule.

It may be that economics, along with the myriad implications of the Fukushima disaster, kill off the current HPC project just as Margaret Thatcher's plans for HPC were killed off by economics and Chernobyl.**[4]**

The government's October 21 announcement states that project partners would be required to start putting money into a fund from the first day of electricity generation to pay for decommissioning and waste management costs associated with HPC.**[1]** However it is silent on where the waste might be disposed of. Martin Forwood from Cumbrians Opposed to a Radioactive Environment said: "The Government's fetish for nuclear power, which has seen Ministers scraping the world's barrel for investors to support its craving, is only matched by its determination to see the industry's nuclear wastes dumped in suspect geology in Cumbria."**[5]**

EPRs

EDF plans to build EPRs (European Pressurized Reactor) at Hinkley and

Sizewell. No EPRs are operating – or have ever operated – anywhere in the world. The construction of two EPRs in China appears to be on schedule and largely untroubled **[6]** – though of course the Chinese state is not known for its transparency.

The other two EPR projects – one reactor each in Finland and France – have been disastrous. When the contract was signed in 2003 for a new EPR in Finland, completion was anticipated in 2009. Now, commercial operation is not anticipated until 2015 — six years behind schedule.**[7]** And utility TVO recently announced that it is "prepared for the possibility" that the plant may not start up until 2016 – seven years behind schedule.**[8]** The estimated cost has ballooned from 3 billion euros to 8 billion.**[9]** Project partners Areva and TVO have been engaged in extensive, ongoing litigation regarding cost overruns.**[10]**

EDF's Flamanville 3 EPR reactor in France is behind schedule — it was originally meant to enter service in 2012 but that date has been pushed back to 2016.**[11]** Its estimated cost has grown from 3.3 billion euros to 8.5 billion.**[12]**

The Daily Mail characterised the French EPR project as one "beset by financial mismanagement with rocketing costs, the deaths of workers, an appalling inability to meet construction deadlines, industrial chaos, and huge environmental concerns", and notes that "it continues to be plagued by delays, soaring costs, and litigation in both the criminal and civil courts." A report by France's nuclear safety authority in 2011 found 13 incidents of below-standard safety measures. In 2011, two former EDF employees were jailed for spying on anti-nuclear campaigners and the company was fined £1.2 million for the crime.**[13]** Italian utility Enel pulled out of the project last December.**[14]**

Chinese partners

The EDF Group has announced the intent of two Chinese companies, China National Nuclear Corporation (CNNC) and China General Nuclear Corporation (CGN), to invest in HPC as minority shareholders, following the signing earlier in October of a Memo-

randum of Understanding on nuclear energy cooperation between the UK and Chinese governments.**[1]**

EDF has been working as a partner with CGN and CNNC for 30 years, including a joint venture to build two EPRs in Taishan, China.**[15]**

According to Nuclear Energy Insider, EDF will have between a 45% and 50% stake in the project, CNNC and CGN will take 30-40% between them, Areva will take 10%, and EDF is discussing with interested companies about the remaining 15%.**[16]** The sovereign wealth funds of Kuwait or Qatar are rumoured to be in the running; in 2010 the Kuwait Investment Authority paid 600 million euros for a 4.8% stake in Areva.**[17]**

Of the four major partners – EDF, Areva, CNNC and CGN – three are 100% state-owned and one is 85% state-owned; two are French and two Chinese.**[18]**

No UK firms are involved after Centrica pulled out of the HPC project earlier this year. Centrica chief executive Sam Laidlaw said that since its initial investment the "anticipated project costs in new nuclear have increased" while the construction timetable "has extended by a number of years".**[19]** Other utilities have also given up on the UK nuclear program; for example German utilities E.ON and RWE reneged on their promise to invest in new nuclear at Anglesey.**[20]**

Former Labour Party chancellor Alistair Darling said the government should look at publicly funding new nuclear plants: "It will be the next generation that pay for these very high wholesale prices of electricity and the point is, you need to ask yourself would it be better for the state to do it as opposed to what looks like quite an expensive deal?"**[21]**

Chinese investment in the UK nuclear program has generated some consternation. Consultant John Large said: "We can see that even with the French operatorship of UK nuclear power stations [through EDF] that there are differences in the regulatory regimes in France and the UK. But these problems would be much more pro-

found with the Chinese, who like the Russians, are rooted in a government system without independent [safety] regulators.”[22]

A GMB union leader said it was “almost Orwellian” to allow a country like China, which has been linked to allegations of corporate hacking, to be allowed access to highly sensitive energy infrastructure. A survey of 75 companies in major emerging economies by Transparency International found that Chinese companies were the least likely to publish financial information and vital details about corporate structure that allows them to be held to account.[22]

China’s domestic nuclear power program certainly leaves much to be desired. He Zuoxiu, a member of the Chinese Academy of Sciences, said earlier this year that “to reduce costs, Chinese designs often cut back on safety”.[24]

Li Yulun, a former vice-president of CNNC, said in October that Chinese “state leaders have put a high priority on [nuclear safety] but companies executing projects do not seem to have the same level of understanding.” Li Yulun noted that Westinghouse has yet to receive approval from British authorities for a modified version of the AP1000 reactor design, while Chinese nuclear safety regulators approved it several years earlier.[25]

In August 2009, the Chinese government dismissed and arrested CNNC president Kang Rixin in a US\$260 million corruption case involving allegations of bid-rigging in nuclear power plant construction.[26]

The first reactor designed and built entirely by the Chinese — in 1990 at Qinshan — had to be torn down and rebuilt because of faults in the foundation and the welding of the steel vessel that contained the reactor itself.[27]

In 2011, Chinese physicist He Zuoxiu warned that “we’re seriously under-prepared, especially on the safety front” for a rapid expansion of nuclear power. Qiang Wang and his colleagues from the Chinese Academy of Sciences noted in April 2011 that China “still lacks a fully independent

nuclear safety regulatory agency.”[27] They also noted that China’s nuclear administrative systems are fragmented among multiple agencies; and China also lags behind the US, France, and Japan when it comes to staff and budget to oversee operational reactors. [28]

Cables released by WikiLeaks in 2011 highlight the secrecy of the bidding process for nuclear power plant contracts in China, the influence of government lobbying, and potential weaknesses in the management and regulatory oversight. Westinghouse representative Gavin Liu was quoted in a cable as saying: “The biggest potential bottleneck is human resources – coming up with enough trained personnel to build and operate all of these new plants, as well as regulate the industry.”[29]

The UK government / EDF agreement has reinvigorated cross-channel rivalries. The Daily Mail explained “why we can’t trust the French with Britain’s nuclear future” and complained that “huge profits are expected to be milked from British consumers to go to the French.”[13]

Economic jiggery-pokery

Most reports estimate a total construction cost of £16 billion for the two 1.6 GW reactors at Hinkley Point, while World Nuclear News gives a cost estimate of £14 billion.[30] The £16 billion estimate equates to £5 billion / GW (US\$8.1 b / GW).

EDF (and its partners) will be guaranteed a minimum price – a ‘strike price’ – for the electricity generated by HPC. If wholesale market prices are below the strike price, the government makes up the difference; if market prices are higher, EDF will have to pay back to government. The government announcement nominates a strike price of £89.50 / megawatt-hour (MWh), fully indexed to the Consumer Price Index, or £92.50/MWh if EDF does not take a final investment decision on proposed new reactors at Sizewell, Suffolk.[1] Those figures are around twice the current wholesale price.

The government announcement flags various circumstances which would lead to upwards or downwards move-

ment of the strike price. The guaranteed minimum price will apply for 35 years.[1]

Paul Dorfman from University College London’s Energy Institute says the deal ties consumers into subsidising one energy source for a whole generation – potentially at a very high level. In contrast, renewable energy sources’ shorter contracts mean the subsidy can be cut if the costs of building wind turbines or solar panels fall. Dorfman predicts that the cost of nuclear “will flatline or hike, while renewables will do nothing but go down”.[31]

Dorfman said the government/EDF agreement “is essentially a subsidy of what we calculate to be £800 million to £1billion a year that the UK taxpayer and energy consumer will be putting into the deep pockets of Chinese and French corporations, which are essentially their governments.”[32]

In addition to the strike price deal, the government has offered to provide a loan guarantee for HPC of up to £10 billion under a scheme whereby the government uses its balance sheet to provide guarantees for major infrastructure projects.[19]

Previous promises that nuclear power would not be subsidised have clearly been breached, notwithstanding disingenuous government claims that the strike price deal and the loan guarantee do not represent subsidies. A number of expert witnesses voiced scepticism at a recent hearing of the UK Environmental Audit Committee. “This is a huge public contribution towards yesterday’s energy thinking,” said Alan Simpson, a former Labour MP. “I just wonder what we are inhaling.”[33]

The government has been indulging in creative accounting and jiggery-pokery. The October 21 announcement asserts that the HPC project “will ... reduce consumer bills over the long-term” [1] but on the same day turncoat LibDem minister Ed Davey said: “I can’t guarantee that. There are huge uncertainties here. It would be absurd to say we can guarantee everything in the 2020s.”[32]

Since the 2010 promise that there would be “no public subsidy” of new

nuclear, ministers have bundled up nuclear with green energy sources to claim that there would be no “unfair” subsidies for nuclear compared to other green sources. That intellectual contortion will need to be unravelled in the coming months as Prime Minister Cameron plans to reduce green levies ... without reducing subsidies available to the nuclear program.

Government claims about job creation have been equally disingenuous. Nuclear critic Tom Burke said: “The Prime Minister proudly boasted that this would create 25,000 jobs. He forgot to mention that only 900 of them will be permanent and that most of the high value jobs will be abroad. He also forgot to mention that the cost per job is over £600,000. This compares rather badly with the 320,000 jobs that could be created spending the same amount on really delivering energy efficiency improvements for British energy consumers.”[34]

The government/EDF agreement “is another disgraceful example of profit being privatised and risk being socialised,” Burke said.

Greenpeace UK executive director John Sauven said: “Hinkley C fails

every test – economic, consumer, and environmental. It will lock a generation of consumers into higher energy bills, via a strike price that’s nearly double the current price of electricity, and it will distort energy policy by displacing newer, cleaner, technologies that are dropping dramatically in price.”[35]

A Greenpeace briefing paper states that the HPC strike price is not only almost double the current market price for electricity, but also well over twice the Department of Energy and Climate Change’s original cost estimate for nuclear power of £38/MWh.[36]

Antony Froggatt from the Chatham House think-tank noted that in 2006, EDF’s submission to a government energy review said that EPR-produced electricity would cost £28.80 / MWh in 2013 values. “This more than threefold increase [to £92.50], over eight years, puts the cost of nuclear electricity at about double the current market rate – higher than that produced by both gas and coal-fired power stations, and more costly than many renewable energy options,” Froggatt said.[37]

Even nuclear convert George Monbiot weighed in with sharp criticisms: “Seven years ago, I collected all the

available cost estimates for nuclear power. ... 8.3 pence was so far beyond what anyone else forecast that I treated it as scarcely credible. It falls a penny short of the price now agreed by the British government. I still support nuclear power. But none of this means that we should accept nuclear power at any cost. And at Hinkley Point the cost is too high.”[38]

Monbiot adds: “That’s not the only respect in which the price is too high. A fundamental principle of all development is that we should know how the story ends. In this case no one has the faintest idea. Cumbria – the only local authority which seemed prepared to accept a dump for the nuclear waste from past and future schemes – rejected the proposal in January. No one should commission a mess without a plan for clearing it up.”

Monbiot’s solution is nothing if not quixotic – non-existent liquid thorium reactors and non-existent integral fast reactors.

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More information:

Stop Hinkley: www.stophinkley.org

UK government: www.gov.uk/government/news/hinkley-point-c

EDF: <http://hinkleypoint.edfenergyconsultation.info/>

(Written by Nuclear Monitor editor Jim Green.)

Why nuclear energy is going nowhere (and other energy news)

An October 4 'Business Insider' article presents five charts from economic analysts Citigroup explaining "why nuclear energy is going nowhere":[1]

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- 1) Nuclear now requires an up-front investment (overnight investment cost) five times greater than gas on a per Watt basis, while solar installation costs are cheaper still.
- 2) Nuclear may have lower operational costs than fossil fuels, but they're still more than the nearly non-existent operational costs of renewables.
- 3) This explains why, worldwide, nuclear investment is already trailing solar.
- 4) During the next two decades, demand for renewables will be greater than for nuclear.
- 5) If you think any help is coming from China, think again – solar capacity alone will eventually be larger than nuclear, and wind capacity will dwarf it.

Citigroup explains: "The capital cost of nuclear build has actually risen in recent decades in some developed markets, partly due to increased safety expenditure, and due to smaller construction programmes (i.e. lower economies of scale). Moreover the 'fixed cost' nature of nuclear generation in combination with its relatively high price (when back end liabilities are taken into account) also places the technology at a significant disadvantage; utilities are reluctant to enter into a very long term (20+ years of operation, and decades of aftercare provisioning) investment with almost no control over costs post commissioning, with the uncertainty and rates of change currently occurring in the energy mix."

Worldwatch Institute report on nuclear stagnation

A new Vital Signs Online report by the Worldwatch Institute notes that global nuclear generation capacity increased in 2012 by 4.2 gigawatts (GW) or 1.1% to 373.1 GW and the number of operational reactors increased by two units to 437.[2,3] The increases are

net figures: three reactors with a total capacity of 1.3 GW were shut down in Canada and the UK, while three new plants in China and South Korea with a total capacity of just under 3 GW came online. In addition, two Canadian reactors (0.77 GW each) returned to service after 15 years off-line.

But those marginal increases mask a gloomy outlook for the industry. The report notes that nuclear power generating capacity increased by 75 GW in the quarter-century from 1987–2012; just one-quarter of the increase of 296 GW during the preceding quarter century.

The figures for nuclear generation (as opposed to capacity) are still more depressing (for the industry).[4] Annual nuclear electricity generation peaked in 2006 at 2,660 terrawatt-hours (TWh), falling to 2,346 TWh in 2012 (down 7% compared to 2011, down 12% from 2006). About three-quarters of this decline was due to the situation in Japan, but 16 other countries, including the top five nuclear generators, also decreased their nuclear generation.

The Worldwatch Institute report notes that nuclear power is now the only mainstream energy technology that does not show significant growth. Its share of the world's primary energy supply actually fell, from 6.4% in 2002 to just 4.5% a decade later.

"Three key factors account for the stagnancy of nuclear power," said Alexander Ochs, Worldwatch's Climate and Energy Director and one of the report's co-authors. "The first and most important one is that nuclear energy is not cost competitive with fossil fuels and renewable energy sources. It is just too expensive. Second are safety concerns. After the many accidents we have had over the years – with

Chernobyl, Fukushima, and Three Mile Island just a few examples of some of the worst incidents; problems occur on a regular basis. And despite stricter oversight in some countries, public opposition to nuclear energy is high almost everywhere in the world. Finally, the storage of nuclear waste still remains unsolved. Nobody really knows what to do with it and nobody wants to have the hazardous material sit in their backyard."

Citibank report on renewables

Renewable energy will account for more than 70% of investment in new power generation by 2025, according to a Citibank report released in October. Of the nearly US\$10 trillion dollars that will be poured into the power sector in the next decade, more than US\$2 trillion will be invested in wind, followed by US \$1.5 trillion in hydropower and US \$1.3 trillion in solar power. [5]

While natural gas has cut into coal's dominance for power generation in the US, the report notes that in the longer run, the lower price of solar will make it increasingly attractive, especially during peak demand periods "Solar steals the most valuable part of electricity generation at the peak of the day when prices are highest," the Citibank report states, noting that German natural gas power plants have already said they are reluctant to build new generation because of the impact of solar power on their profits.

Citibank estimates that more than US\$37 trillion will be invested in global energy infrastructure in the next two decades, with nearly half of that amount devoted to electricity generation. Oil production will account for about 37% of total investment, followed by natural gas at 23%.

Germany's energy crisis

Germany's coal and nuclear utilities are in trouble due to the growth of renewables.

Solar and wind energy production accounted for nearly 60% of Germany's electricity use on Thursday October 3 according to a study by energy consultant Bernard Chabot. At peak production – around noon that day – wind and energy were producing about 59.1% of the nation's power.[6] In July, Germany generated 5.1 terawatt hours (TWh) of electricity from solar, a monthly record and 42% higher than July 2012. In January, wind turbines generated 5 TWh of electricity.[7]

RWE, Germany's largest power producer, has decided to radically depart from its traditional business model based on large-scale thermal power production. Confidential strategy documents discussed at a recent meeting of RWE's Supervisory Board make it clear that the company's leadership has accepted that it must shift away from its traditional heavy reliance on

coal-fired and nuclear plants if it wants to survive in the new energy world created by Germany's and the EU's Energiewende. "The massive erosion of wholesale prices caused by the growth of German photovoltaics constitutes a serious problem for RWE which may even threaten the company's survival", states the company's Strategic Roadmap.[8]

In August, RWE said 3.1 GW of gas- and coal-fired generating capacity would be taken offline or shut down, representing 6% of its total capacity. The company said the boom in solar energy meant many of its power stations were no longer profitable. German rival E.ON said it had shut down or left idle 6.5 GW of generating capacity.[7]

In September 2011, German industrial conglomerate Siemens announced its intention to withdraw entirely from the

nuclear industry. Chief executive Peter Loescher said: "The chapter for us is closed." Siemens was responsible for building all Germany's existing nuclear power reactors.[9]

Carbon capture projects losing momentum

The number of projects that capture carbon dioxide emissions from power plants and industrial facilities is losing momentum, dropping from 75 to 65 worldwide since 2012, according to a study released in October. The Global CCS Institute, an Australian-funded research group supporting the deployment of carbon capture and storage technology worldwide, said in its annual survey that despite four new large-scale projects coming online this year, the rate of new projects entering the pipeline has slowed.[10]

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South Korea indicts 100 people over safety scandals

South Korea has indicted 100 people of corruption and forgery in the scandal over fake safety certifications for parts in its nuclear reactors, authorities said on October 3.

771.4349 The people are from Korea Hydro and Nuclear Power Co (KHNP – which operates the nation's 23 nuclear reactors), from parts suppliers, and from certifiers.[1] A vice president at Korea Electric Power Corp. (KEPCO) and a former KHNP chief executive face bribery charges.[2] The scandal broke last November after the country's energy ministry ordered

the shutdown of two reactors after admissions that eight unnamed firms that supplied parts had faked certificates covering thousands of nuclear power components from 2003 to 2012, affecting at least five reactors. Then in May, it was revealed that four other reactors had components (safety-related control cabling) with forged documentation, prompting the shut down of

two reactors for about four months for replacements.[1] Currently, six of the country's 23 reactors are off-line either because of the scandal or scheduled outages.

According to the government's policy coordination ministry, 277 out of 22,000 documents of tests on components at 20 reactors were found to be forged. Of 218,000 documents examined for a further eight units, including five under construction, a total of 2,010 were found to be falsified.[3]

The scandal continues to widen. On October 16, KHNP revealed that control cables at two reactors under construction – Shin Kori 3 and 4 – failed a re-evaluation. Completion of these reactors has been put back by 6–12 months.[1]

Park Young-June, a former deputy minister in charge of energy, has been charged with accepting 50 million won (US\$45,000) bribes in 2010 in return for favouring a constructor bidding for a nuclear reactor contract. He is also charged with taking money from Kim Jong-Shin, the one-time chief of KHNP.[4]

In late September, new KHNP chief executive Cho Seok issued a public apology. “Our domestic nuclear project is facing the utmost crisis,” he said, adding that public trust had “hit the ground” because of Fukushima and the corruption issues in Korea.[3]

The Atomic Power Review website provides a useful summary of recent events:[5]

“In terms of ‘will parts with faked certificates actually work,’ the answer appears in at least one case to be ‘no,’ and ‘do parts supplied under these bribery-induced contracts meet specs,’ the answer also appears to be ‘no.’ Much else has developed in the interim. Let’s detail developments in recent times, since it was announced that about 100 people had been indicted overall in the scandal ...

- In early October, it was found that eight nuclear cable suppliers were price fixing; a fine was imposed and a case referred to prosecutors.[6]
- The cable makers were found to have been paying very high dividends – and it was noted that the fine amount was insignificant to deter the practice when compared with the profit derived from a successful bid.[7]
- A large number of faked testing results were discovered in connection with investigation into the corruption scandal, including 277 used to cover

parts at operating plants.[8]

- Suspect cables have failed inspections at two reactor plants.[9]
- On October 17 it was revealed that the Korean Government would sue LS Group, which owns JS Cable – the major culprit in supply of suspect cables.[10]
- Another piece hinted that LS Group might sue Korea Hydro & Nuclear Power.[11]
- On October 22, Korea Hydro & Nuclear Power confirmed it would sue LS Group for very significant amounts in damages.[12]

On October 13, a government working group recommended that nuclear power capacity be kept between 22–29% of total electricity generation by 2035, well below existing plans to grow the sector to 41% in less than 20 years. The government will hold public hearings to decide whether to back the recommendation before finalising its policy in December.[13]

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See also Nuclear Monitor #765, 1 Aug 2013, ‘South Korea: Nuclear scandal widens’

Nuclear weapons states on the defensive

Numerous recent nuclear disarmament initiatives have the nuclear weapons states and their allies squirming.

771.4350 A joint statement on the humanitarian consequences of nuclear weapons was delivered by New Zealand at the United Nations General Assembly in New York on October 21. Expressing deep concern for the catastrophic consequences that any use of nuclear weapons would entail, as well as for their uncontrollable destructive capability and indiscrimi-

nate nature, the New Zealand statement was signed by 123 other member states.[1]

Japan agreed to endorse the statement but only once the wording had been tempered. The statement does not discuss “outlawing” nuclear arms as a 2012 statement did. Norway and Denmark, which as members of NATO

receive nuclear deterrence ‘protection’, also supported the statement. It was not backed by any of the nuclear weapons states.[2] Australia tried to undermine the New Zealand-led initiative with a weaker resolution, which was endorsed by just 17 states (while the US endorsed neither).[7] Australia actively supports the US nuclear weapons program.

Dutch peace group IKV Pax Christi has expressed deep disappointment at

the nuclear weapons policy published on October 24 by Dutch Foreign Minister Timmermans. IKV Pax Christi notes that Timmermans ignores Dutch responsibility for facilitating the ongoing presence of US nuclear weapons in Europe including the presence of 20 nuclear weapons at the Dutch airbase Volkel, and he offers no concrete proposals to rid the Netherlands of nuclear weapons.[3]

The Latin American and Caribbean Leadership Network for Nuclear Disarmament and Nonproliferation released a statement on October 18 urging leaders worldwide to firmly take the essential steps toward the elimination of Nuclear Weapons.[4]

On October 18, Ambassador Manuel Dengo (Costa Rica) introduced a draft resolution to the UN General Assembly as a follow-up to the successful UN Open Ended Working Group (OEWG) which met earlier this year in Geneva. The draft resolution, co-sponsored by another 17 countries, highlights the positive way in which the OEWG enabled governments and civil society to engage in a constructive manner to address various issues related to nuclear disarmament, calls on the Conference on Disarmament (CD) and other fora to take up the nuclear disarmament proposals in the OEWG report, and calls for a review of multilateral nuclear disarmament negotiations at the UN General Assembly in 2014 to decide whether further work should be undertaken by the OEWG to take forward multilateral nuclear disarmament negotiations.[5]

The OEWG was established by the UN General Assembly in November

2012 (and commenced its work in May 2013). The momentum developed by the OEWG led to the CD finally agreeing to establish an informal working group on nuclear disarmament in August 2013. The nuclear disarmament proposals in the OEWG report can now feed into this CD process.

If successful, we could soon see the start of multilateral negotiations to achieve a nuclear weapons free world.

If not, then the OEWG could restart again in 2014 to take the next steps toward such negotiations.

NGOs involved in this work are calling on citizens around the world to lobby their national governments to support the draft UN resolution – for more information see www.openthedoor2013.org and www.baselpeaceoffice.org/oewg

A statement drafted by International Physicians for the Prevention of War and released at the 13th World Summit of Nobel Peace Laureates (nobelforpeace-summits.org) in Warsaw, calls for outlawing and eliminating nuclear weapons as a humanitarian imperative.

In addition to IPPNW (the 1985 Peace Laureate), the statement has been endorsed by Peace Laureates the International Peace Bureau, the American Friends Service Committee, Mairead Corrigan Maguire, Lech Walesa, the Dalai Lama, F. W. De Klerk, the Pugwash Conferences, Jody Williams, Shirin Ebadi, and Muhammad Yunus. Other Laureates are expected to endorse the statement.[6]
On September 26, the overwhel-

ming majority of countries condemned the continued existence of nuclear weapons and called for their banning and elimination at the first ever UN high-level meeting on nuclear disarmament. Ray Acheson and Beatrice Fihn from Reaching Critical Will wrote: “In an attempt to counter this rising wave of states free of nuclear weapons asserting their agency over the nuclear disarmament question, the nuclear-armed states complained about “distractions” from “existing processes”. The nuclear-armed states, and some of their allies that still believe they “benefit” from nuclear weapons, argued that the step-by-step approach to disarmament is the “only” way forward. In a defensively worded joint statement by France, the United Kingdom, and United States, the three nuclear-armed states expressed “regret” that some states and civil society have decided to highlight the humanitarian consequences of nuclear weapons ... They argued that energy should instead be directed to existing processes and making progress on the step-by-step agenda. However, as the Philippines noted, the step-by-step process has become synonymous with foot dragging.”[8]

‘Don’t Bank on the Bomb’ is a global report into the financing of nuclear weapons, released by IKV Pax Christi and ICAN, which aims to increase the transparency of the finance sectors’ investments. It details how 298 private and public financial institutions continue to invest almost US\$314 billion into 27 companies involved in the production, maintenance and modernisation of nuclear weapons. The report is posted at: www.dontbankonthebomb.com

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Yellowcake submarines

The UK Office for Nuclear Regulation has issued an improvement notice on the Devonport Dockyard in Plymouth after a report revealed lapses.

771.4351 The naval base is operated by the Ministry of Defence (MoD) and government engineering contractors Babcock Marine. On 29 July 2012, the electric-power source for coolant to submarine reactors failed and then the diesel back-up generators also failed, according to a heavily redacted report from the MoD's Site Event Report Committee.^[1]

Babcock launched an internal investigation after the incident, blaming the complete loss of power on a defect in the central switchboard and acknowledging that the event had "potential nuclear implications". Among a number of "areas of concern" uncovered by Babcock was what was described as an "inability to learn from previous incidents and to implement the recommendations from previous event reports".^[1]

The Office for Nuclear Regulation issued an improvement notice for three alleged breaches of health and safety legislation, and of Section 24 of the Nuclear Installations Act – regarding "operating instructions".^[1]

The MoD's Site Event Report Committee report notes that there had been two previous electrical failures at Devonport – the loss of primary and alternative shore supply to nuclear submarine HMS Talent in 2009, and the loss of "AC shore supply" to the nuclear submarine HMS Trafalgar in 2011.^[1]

Regarding the July 2012 loss of power incident, independent nuclear consultant John Large said: "It is unbelievable that this happened. It could have been very serious. Things like this shouldn't happen. It is a fundamental that these fail-safe requirements work. It had all the seriousness of a major meltdown – a major radioactive release." Large warned that if a submarine had recently entered the base when the failure occurred the situation could have been "dire" because of high heat levels in its reactor.^[1]

The loss of power incident is one of 11 incidents in the past five years at two nuclear submarine bases, the MoD has revealed. Radioactive waste has been spilled, workers exposed to radiation, power supplies lost, safety valves wrongly operated and a bag of waste mistakenly dropped overboard. Six of the incidents happened at Faslane in Scotland, five at Devonport. The incidents have been admitted by UK defence minister, Philip Dunne, in response to a parliamentary question.^[2]

According to the MoD, six incidents since 2008 at Faslane have been defined as "category B", the second-worst rating, involving "actual or high potential for a contained release within building or submarine or unplanned exposure to radiation". In 2008, valves on board a submarine were shut "in error" at Faslane, causing a loss of power. In 2009, there were two problems with cranes at Faslane being used more often than they should be without authorisation.

In 2010, the melting of an ice plug caused by the failure of a liquid nitrogen supply resulted in radioactive coolant leaking into a submarine reactor compartment at Faslane. In the same year, a bag of potentially contaminated clothing fell overboard. Last year, maintenance workers entered an area next to a reactor compartment "without the proper radiological controls in place and hence received an unplanned exposure to a radiological dose," the MoD said.^[2]

The five incidents at Devonport include a spillage of reactor coolant "into the environment" in 2008, the operation of two submarines without key safety valves in 2010 and an overflowing radioactive waste tank in 2011. The July 2012 loss of power incident is also included in the list. Although the MoD described what happened in 10 instances, it refused to give details of one event at Devonport because "disclosure would be likely to preju-

dice the capability, effectiveness or security of the armed forces".^[2]

UK Defence Nuclear Safety Regulator report

The 2012–13 report of the Defence Nuclear Safety Regulator (DNSR) revealed:^[4,5,6]

- Cracks in reactors and nuclear discharges, directly attributable to the Royal Navy's oldest Trafalgar Class SSNs (Ship Submarine Nuclear) remaining in service beyond their design date.
- Faults with the new Astute Class submarines that will delay their entry into service, forcing the Navy to continue sailing the ageing and potentially dangerous Trafalgars.
- The Atomic Weapons Establishment failed to notice or rectify corrosion to a nuclear missile treatment plant in Berkshire.
- Nuclear-qualified engineers are quitting the Navy in droves over poor pay and conditions, creating a skills crisis.

DNSR head Richard Savage wrote: "Significant and sustained attention is required to ensure maintenance of adequate safety performance and the rating [Red] reflects the potential impact if changes are ill-conceived or implemented. The inability to sustain a sufficient number of nuclear suitably competent personnel is the principal threat to safety. Vulnerabilities exist in core skill areas, including safety, propulsion, power and naval architects."^[4]

In March 2007, two sailors were killed on HMS Tireless when an oxygen generator exploded during an Arctic exercise. An inquest heard that there was a significant possibility the generator was salvaged from a hazardous waste depot in a cost-cutting bid by the MoD. HMS Tireless leaked radioactive coolant from its reactor for eight days in February 2013 including six days at the Devonport dockyard in Plymouth.^[4,6]

The DNSR report states: "Inspection programmes have not been as comprehensive as regulators would expect. As an example, corrosion in

the structural supports of a building was not identified as early as would be expected which resulted in the Office for Nuclear Regulation issuing a Safety Improvement Notice.” AWE admitted corrosion had affected its uranium component manufacturing facility.[4]

Meanwhile, there are fears that two major naval bases (Devonport and Rosyth, Fife) sited near large British cities could become nuclear waste storage facilities by default after it was revealed the MoD proposes to remove low-level radioactive waste from the UK’s nuclear submarine fleet. The first of Britain’s fleet of 27 nuclear submarines is due to be dismantled within five years. But according to minutes of the Submarine Dismantling Project Advisory Group, there is “uncertainty running to several decades” over a long-term storage solution for radioactive waste. There are seven retired subs at Rosyth and eight at Devonport.[3]

Russia

A fire broke out on a Russian nuclear submarine undergoing repairs, according to news reports in September, but no injuries or radiation leaks were reported. Russian news reports said the fire on the Tomsk submarine at repair yards in the Pacific coast city of

Bolshoi Kamen had been extinguished with foam on September 16. The Tomsk, capable of firing cruise missiles, has been undergoing repairs since 2010. Reports said all its weaponry had been removed and the reactor was shut down, although it was not clear if any nuclear material remained in the reactor.[7]

Large-scale Soviet nuclear tests, dumping of spent fuel and two scuttled nuclear-powered submarines are a major source of pollution in the Arctic ocean. There are 17,000 containers and 19 vessels holding radioactive waste submerged in the Kara Sea, as well as 14 nuclear reactors including five that still contain spent nuclear fuel, and 735 other pieces of radioactively contaminated heavy machinery. In addition, the Soviet nuclear submarine K-27 was scuttled in 1981 in the Kara Sea. The K-27, equipped with two nuclear reactors (and their irradiated fuel), was filled with bitumen and concrete before being sunk, to ensure that it would lie safely on the ocean floor for 50 years.[8,9,10]

As the Arctic thaws under the influence of global warming, oceanic currents in the region could hasten the spread of radioactive materials. But according to Bellona’s Igor Kurdrik, an expert

on Russian naval nuclear waste, the Russian state has another interest: “We know that the Russians have an interest in oil exploration in this area. They therefore want to know where the radioactive waste is so they can clean it up before they begin oil recovery operations.”[10]

USA

The US Navy has decided to scrap the USS Miami instead of fixing the nuclear submarine, which a civilian shipyard worker set fire to in 2012. The submarine was commissioned in 1990 at a cost of US\$900 million. It sustained US\$450 million in damages after Casey James Fury, a shipyard worker, set the 23 May 2012 blaze.[11]

The fire damaged forward compartments including living quarters, a command and control centre and the torpedo room. Weapons had been removed prior to the fire, and the fire never reached the rear of the submarine, where the nuclear propulsion components are located. Fury said he was suffering from anxiety and having problems with his ex-girlfriend and set the fire in order to get out of work early. It took 12 hours and the efforts of more than 100 firefighters to extinguish the fire. Seven people were hurt. Fury is serving 17 years in federal prison.[11]

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Greenland drops uranium mining ban

Greenland's parliament has voted in favour of lifting the country's long-standing ban on uranium mining.

771.4352 The move could enable the Kvanefjeld uranium / rare earths project to proceed. The country introduced a ban on the mining of uranium and other radioactive elements in 1988, while under Danish direct rule. However, in a 15-14 vote, the parliament voted to repeal the ban on October 24.^[1]

The vote came after five hours of heated debate that saw efforts to bring a no-confidence vote against the government, as well as a failed vote to put the ban to a referendum.^[2] Sara Olsvig from Inuit Ataqatigiit, the largest opposition party, said: "We sought a compromise with the government and proposed that parliament decide on whether to conduct a broad information campaign followed by a national referendum. The government chose to ignore this proposition, as they also chose to ignore the many demonstrations against uranium and for a referendum, held in numerous towns

in Greenland, the day before and on the day of the vote. The demonstration held in Nuuk is said to be the largest demonstration in Greenland for 29 years."^[4]

Australia's Greenland Minerals and Energy – owner of the Kvanefjeld uranium and rare earths project in southern Greenland – welcomed the move. The Kvanefjeld project is currently the subject of a feasibility study.^[1]

The Aboriginal-led Australian Nuclear Free Alliance will write to the Danish government, urging it to intervene. Greenland is a self-governing member of the Danish kingdom, but its defence and foreign policies are determined in Copenhagen. Whether uranium mining and export can proceed without Danish support is a contested question. It is possible – but unlikely – that the Danish Parliament will vote on the matter of uranium mining in Greenland.

The Danish government has made an agreement with the Greenland government declaring their common intention to regulate export of uranium together.

Gitte Seeberg, the head of WWF Denmark, expressed regret that parliament had not respected the wish of a majority of Greenlanders and held a referendum. "Greenland could become one of the world's biggest uranium exporters, and that calls not just for parliament's approval, but also the approval of the people," Seeberg said.^[2]

Avataq, the Danish Ecological Council, NOAH FoE Denmark and others have been fighting the proposal to repeal the uranium ban.^[3]

A non-binding referendum may be held covering Southern Greenland including the Kvanefjeld project. The Greenlandic Premier Minister Aleqa Hammond promised such a referendum in her opening speech at the autumn session of Parliament and the promise has not been revoked.

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EU state aid victory

The European Commission (EC) has ruled out creating specific State Aid guidelines for nuclear power; guidelines which would facilitate increased public funding of nuclear power programs.

771.4353 A draft of new guidelines by The European Commission (EC) has ruled out creating specific State Aid guidelines for nuclear power; guidelines which would facilitate increased public funding of nuclear power programs. A draft of new guidelines by the EC specifically addressed the possibility of allowing public support for nuclear power. However, that proposal has been withdrawn after protest from

some European governments – e.g. Austria and Germany – and a strong civil society campaign. A spokesperson for EU Competition Commissioner Joaquin Almunia said the decision not to proceed with guidelines for nuclear power did not make it illegal to use public money to help finance nuclear power: "This simply means that state aid notifications by member states will continue to be

assessed directly under (EU) treaty rules and the standard in this field will be determined by the Commission's case practice."^[1] European Commission spokesperson Antoine Colombari said on July 23: "State aid for nuclear power is currently not prohibited by EU rules: member states' plans in that respect are notified to the commission and assessed directly under the Treaty rules, in

the absence of specific commission guidelines in this sector. The purpose of this assessment is to check that such subsidies do not unduly distort competition in the EU single market, as member states are of course free to make their own choices when it comes to nuclear power.”[2]

Colombani noted that the EC is planning to adopt guidelines on state aid for energy and environmental protection next year. While the establishment of guidelines facilitating increased state aid for nuclear power has been excluded for now, the pro-nuclear forces will likely continue lobbying.

The inclusion of guidelines for state aid for nuclear power may have made it easier for the UK to secure EC approval under competition laws for the subsidies it is offering to EDF and other partners in the Hinkley Point C

nuclear power project. However there are many variables and unknowns, and Hinkley will be a test case for the EC. A spokesperson for the UK Department of Energy and Climate Change said: “The Commission’s draft guidelines have not been published yet. It is already possible to seek approval for aid for new nuclear, whether this is explicitly provided for in the new guidelines or not.”[3]

State aid to renewable energy sources and energy efficiency is covered by an exemption in current guidelines for environmental state aid dating back to 2008.[4]

A draft report by the European Union Energy Director-General indicated that in 2011, 35 billion euros were spent on public subsidies for nuclear power, compared to 26 billion for fossil fuels and 30 billion for all types of renewable

energy sources combined. The figures were not included in a subsequent draft.[5]

Several countries in central and eastern Europe are planning to expand or introduce nuclear power.[6] Speaking on behalf of the governments of four of these countries – Poland, Czech Republic, Hungary and Slovakia – Hungarian prime minister Viktor Orban made a stridently pro-nuclear speech in mid-October. The statement cautioned against over-regulation of nuclear power and called for the EU’s stance on state aid for energy projects to be reconsidered “because in our view, nuclear energy is being discriminated against.” He said the four nations “expect the European Union to facilitate the increase of Central Europe’s nuclear capacity, rather than impede it.”[7]

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Fresh revelations cast doubt over reliability of Iraq birth defect study

Trust in the findings of a study into rates of congenital birth defects in Iraq, undertaken by the WHO and Iraqi Ministry of Health, has continued to decline after interventions from three former UN officials.

771.4354 The International Coalition to Ban Uranium Weapons (ICBUW) continues to argue that full transparency is the only way for the WHO and Iraqi Ministry of Health to rebuild the study’s credibility.

The interim results of the study which, following a BBC documentary earlier

this year had been expected to make a link between increased incidence of congenital birth defects and areas subject to heavy fighting, found completely the opposite. The study claimed that, although rates across Iraq had increased since the early 90s, they are now largely similar to those seen in the EU. The exceptions were Basrah and

Fallujah, where, it was claimed, rates are around half that expected in high income settings. The results contrasted starkly with those from previous studies.

Critics, including Dr Keith Baverstock, have questioned the study methodology’s reliance on household questionnaires instead of analysis of hospital records, which are typically seen as more accurate. Baverstock, who worked for the WHO on radiation and health for 13 years, told The Guardian

that the report “is not of scientific quality. It wouldn’t pass peer review in one of the worst journals.”

Baverstock said: “The way this document has been produced is extremely suspicious. There are question marks about the role of the US and UK, who have a conflict of interest in this sort of study due to compensation issues that might arise from findings determining a link between higher birth defects and DU. I can say that the US and UK have been very reluctant to disclose the locations of DU deployment, which might throw further light on this correlation.”

Meanwhile Neel Mani, who served as the WHO’s Iraq director between 2001 and 2003 has shed light on previous examples of political interference in Iraq’s public health research. In an article for The Huffington Post, Mani argues that while he does not feel that WHO staff have ever sought to block or downplay research, “it is clear that the imbalances that exist in its funding, particularly for those public health projects that go beyond its regular country budgets, are open to state influence. In a system in which the financing is so disparate among member states, it is

obvious that those who influence the purse influence the spend.”

Mani had direct experience of political interference in health research in the country during his tenure when UN Security Council members repeatedly blocked his attempts to fund research into rates of cancers and birth defects in Iraq. He writes: “any project that proposed to investigate abnormal rates of birth defects in southern Iraq and their relation, if any, to environmental contamination, never got through the Security Council’s approval process.” In his article, Mani accuses Security Council members of appalling cynicism and the Coalition Provisional Authority of arrogance.

Speaking to The Guardian about the study findings, a third UN official, the former UN assistant secretary general and UN humanitarian coordinator for Iraq Hans von Sponeck, said: “The brevity of this report is unacceptable... Everybody was expecting a proper, professional scientific paper, with properly scrutinised and checkable empirical data. Although I would be guarded about jumping to conclusions, WHO cannot be surprised if people ask questions about whether the body is giving into bilateral political pressures.”

Von Sponeck said that US political pressure on WHO had scuppered previous investigations into the impact of DU on Iraq: “I served in Baghdad and was confronted with the reality of the environmental impact of DU. In 2001, I saw in Geneva how a WHO mission to conduct on-spot assessments in Basra and southern Iraq, where depleted uranium had led to devastating environmental health problems, was aborted under US political pressure. ... It would not be surprising if such US pressure has continued. There is definitive evidence of an alarming rise in birth defects, leukaemia, cancer and other carcinogenic diseases in Iraq after the war. Looking at the stark difference between previous descriptions of the WHO study’s findings and this new report, it seems that someone, somewhere clumsily decided that they would not release these damning findings, but instead obscure them.”

ICBUW supports Fallujah paediatrician Dr Samira Al’aani’s call for the full dataset to be released and for the open and independent peer-review of the study’s findings and methodology.

Abridged from a 15 October 2013 International Coalition to Ban Uranium Weapons web-post, www.bandedpleteduranium.org/en/fresh-doubts-over-reliability-iraq-study

With additional material from: Nafeez Ahmed, 14 Oct 2013, ‘How the World Health Organisation covered up Iraq’s nuclear nightmare’, www.theguardian.com/environment/earth-insight/2013/oct/13/world-health-organisation-iraq-war-depleted-uranium

Nuclear news

Nuclear fuel damage in Slovenian reactor

During a regular maintenance outage at the Krsko nuclear power plant in Slovenia, nuclear fuel was damaged.

Andrej Stritar, director of the Nuclear Safety Directorate, responded to a list of questions from Focus Association for Sustainable Development and Greenpeace Slovenia. Stritar said that on October 8, during an operation to transfer fuel from the reactor to the spent fuel pool, a fuel rod length of about 0.5m broke off and fell to the bottom of the spent fuel pool. Elevated radioactivity levels in the reactor pool,

first detected in 2012, suggested a problem with fuel leaks.

Stritar said a report would be prepared into the incident but would not promise public release of the full report – his excuse is that release of the full report might jeopardise commercial intellectual property of the fuel manufacturer (Westinghouse).

Stritar said there are several possible causes of the incident such as small foreign objects that may damage the metal, or a manufacturing error.

Stritar said (translation by google-trans-

late): “A finding of leaking fuel rods have not been evaluated by the INES scale, so we can not yet say what level would be.”

The maintenance outage began on October 1 and will be extended beyond the planned 35-day period.

Questions and comments from Focus Association for Sustainable Development and Greenpeace Slovenia (google-translation): <http://tinyurl.com/fasd-gs>

Andrej Stritar’s response to questions (google-translation): <http://tinyurl.com/stritar>

Canada opens uranium sector to European investment, scraps new reactor plans

A trade accord agreed in principle between Canada and the European Union (EU) will ease restrictions on European investment in Canada's uranium industry. It opens the door for companies like Areva SA and Rio Tinto to make much larger investments in Saskatchewan's uranium-rich Athabasca Basin. Saskatchewan premier Brad Wall said that the changes would make the province's uranium mining projects "much more attractive" to EU investors and estimated that the province could see investments of up to US\$2.4 billion over the next 15 years as a result of the agreement.[1]

Investment restrictions have been in place since 1970, when Ottawa introduced the non-residential ownership policy (NROP). The law prevents foreign companies from owning more than 49% of a uranium mine in Canada, unless they cannot find a Canadian partner. The NROP has limited the competition for Canadian uranium leader Cameco, which owns stakes in most of the major projects in the Athabasca. Cameco's position has been that the NROP should remain in place unless other countries open up to uranium investment as well. While this free trade deal may open up the European market for Cameco, a company spokesperson said there are no obvious uranium resource opportu-

nities on the continent that are worth developing.[2]

The Ontario government announced in October that it has abandoned plans for two new nuclear power plants and will focus on refurbishing its ageing facilities instead.[3] Ontario Power Generation had received detailed construction plans, schedules and cost estimates for the two reactor designs under consideration for new build at Darlington. The province's other nuclear operator, Bruce Power, has brought four mothballed units at the Bruce A plant back online but pulled back from plans for new units at Bruce in 2009.[4]

- 1 www.world-nuclear-news.org/NP-Trade_deal_opens_door_to_EU_investors-2210138.html
- 2 www.theprovince.com/business/Canada+uranium+market+free+trade+deal+pushes+industry+past+Cold/9066177/story.html
- 3 <http://planetark.org/enviro-news/item/70024>
- 4 www.world-nuclear-news.org/NN-Submissions_in_for_Canadian_plant-0107137.html

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 world-wide 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

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US and Canada based readers should contact NIRS for details on how to receive the Nuclear Monitor (nirsnet@nirs.org). All others receive the Nuclear Monitor through WISE.

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