

NUCLEAR MONITOR

A PUBLICATION OF WORLD INFORMATION SERVICE ON ENERGY (WISE)
AND THE NUCLEAR INFORMATION & RESOURCE SERVICE (NIRS)

wise
World Information Service on Energy
founded in 1978



MARCH 5, 2012 | No. 743

MONITORED THIS ISSUE:

LESSONS FROM FUKUSHIMA

It has been almost 12 months since the Fukushima nuclear disaster began. Although the Great East Japan earthquake and the following tsunami triggered it, the key causes of the nuclear accident lie in the institutional failures of political influence and industry-led regulation. It was a failure of human institutions to acknowledge real reactor risks, a failure to establish and enforce appropriate nuclear safety standards and a failure to ultimately protect the public and the environment

(743.6232) Greenpeace International - Greenpeace International commissioned the "Lessons from Fukushima" report that addresses what lessons can be taken away from this catastrophe. The one-year memorial of the Fukushima accident offers a unique opportunity to ask ourselves what the tragedy – which is far from being over for hundreds of thousands of Japanese people – has taught us. And it also raises the question, are we prepared to learn?

There are broader issues and essential questions that still deserve our attention:

- How it is possible that – despite all assurances – a major nuclear accident on the scale of the Chernobyl disaster of 1986 happened again, in one of the world's most industrially advanced countries?
- Why did emergency and evacuation plans not

work to protect people from excessive exposure to the radioactive fallout and resulting contamination? Why is the government still failing to better protect its citizens from radiation one year later?

- Why are the over 100,000 people who suffer the most from the impacts of the nuclear accident still not receiving adequate financial and social support to

help them rebuild their homes, lives and communities?

These are the fundamental questions that we need to ask to be able to learn from the Fukushima nuclear disaster. The just released Greenpeace report looks into them and draws some important conclusions:

1. The Fukushima nuclear accident marks the end of the 'nuclear safety' paradigm.
2. The Fukushima nuclear accident exposes the deep and systemic failure of the very institutions that are supposed to control nuclear power and protect people from its accidents.

End of nuclear safety paradigm

Why do we talk about the end of a paradigm? After what we have seen of the failures in Fukushima, we can conclude that

'nuclear safety' does not exist in reality. There are only nuclear risks, inherent to every reactor, and these risks are unpredictable. At any time, an unforeseen combination of technological failures, human errors or natural disasters at any one of the world's reactors could lead to a reactor quickly getting out of control.

11,000,000,000,000 yen for Tepco bailout.

Tepco (Tokyo Electric Power) is set to receive a government bailout that may cost as much as 11 trillion yen (US \$137 billion or 102 bn euro) after the Fukushima nuclear disaster, the largest in Japan since the rescue of the banking industry in the 1990s. Japan's government included 2 trillion yen in this year's budget for the Nuclear Damage Liability Facilitation Fund, the bailout vehicle for Tepco. The government plans to budget 4 trillion yen in the next fiscal year and has issued 5 trillion yen of so called delivery bonds, which the state fund can cash in for financial aid to Tepco. The funds redeemed can only be used to compensate those affected by the disaster.

Bloomberg, 24 February 2012

LESSONS FROM FUKUSHIMA	1
COMPARATIVE ANALYSIS OF RESPONSES AFTER CHERNOBYL AND FUKUSHIMA	3
CANADA TO SELL URANIUM TO CHINA	6
HELP STOP THE RADIOACTIVE POISONING OF RECYCLING! AGAIN.	7
URANIUM MINING AND WATER	8
ENERGY SECURITY FOR WHAT? FOR WHOM?	9
IN BRIEFS	10

In Fukushima, the multiple barriers that were engineered to keep radiation away from the environment and people failed rapidly. In less than 24 hours following the loss of cooling at the first Fukushima reactor, a major hydrogen explosion blew apart the last remaining barrier between massive amounts of radiation and the open air.

Probabilistic Safety Assessments

At the heart of claims of nuclear safety is an assumption that accidents, which lead to significant releases of radiation, have a very low probability of occurring. International safety regulators have adopted a nuclear safety paradigm under which, for accidents that are categorised as 'design basis' events, the design of a plant must guarantee no significant radioactive releases will occur. These events are also often referred to as 'credible' accidents. Accidents involving significant radiation releases, like those at Fukushima Daiichi are called 'incredible' or 'beyond design basis' events. These are claimed to be of an extraordinary low probability. These numbers are the results of PSA (probabilistic safety assessment) studies. However, PSAs cannot provide meaningful estimates for accident frequencies (probabilities), since they cannot take into account all relevant factors (e.g. they cannot cover inadequate regulatory oversight) and the factors that are included are beset with huge uncertainties (e.g. regarding earthquakes).

The designs for all reactors in operation, including the Fukushima Daiichi units, were established in the 1960s. The 'design basis' of reactors was based upon 'reasonably foreseeable' accidents, i.e. accidents that, according to industry experts, could be expected. Also the designs applied the antiquated engineering modelling and methodology available during that time period more than 40 years ago.

In the following decades, accidents involving significant radiation releases that were initially deemed as 'incredible' began to occur, such as Three Mile Island (1979) and Chernobyl (1986). Despite some development in nuclear assessments, e.g. in terms of the kind of accidents taken into account, the nuclear sector did not question the safety paradigm but carried on using the model, i.e. the probabilistic risk assessments, to justify the allowance of certain reactor weaknesses and vulnerabilities.

Regulators and the industry call nuclear power 'safe', because their calculational methodology depicts events that could cause a significant accident, like the one that occurred at Fukushima Daiichi, as extremely unlikely. Reactors were allowed to be constructed in ways that do not allow them to withstand such events. According to probabilistic risk assessments, the chance of a 'beyond design basis' accident, which causes a core melt and a significant radioactive

Sixty centimeters of cement on seabed off Fukushima. Tepco is to cover a large swathe of seabed near the battered reactors with cement in a bid to halt the spread of radiation, the company announced on 22 February 2012. A clay-cement compound will be laid over 73,000 square meters (equivalent to around 10 soccer pitches) of the floor of the Pacific Ocean in front of the Fukushima Daiichi plant on the nation's northeast coast. The cover will be 60 centimeters thick, with 10 centimeters expected to be eaten away by seawater every 50 years, the Tepco official said. "This is meant to prevent further contamination of the ocean... as sample tests have shown a relatively high concentration of radioactive substances in the sea soil in the bay," a company spokeswoman said. 'Relatively high'? sounds not worth 60 cm of cement... So, relatively high compared to what?

Japan Today, 22 February 2012

release, is less than once in a million years of reactor operation. The Fukushima Daiichi disaster, however, has shown this theory of nuclear safety to be false.

By 2011, the world had accumulated just over 14,000 years of reactor operating experience. The International Atomic Energy Agency (IAEA) safety guidelines state that the frequency of actual core damage should be less than once in 100,000 years. Hence, with more than 400 reactors operating worldwide, a significant reactor accident would be expected to occur approximately once every 250 years.

Culminating with the Fukushima Daiichi accidents in 2011 there have been five major accidents involving significant fuel melt during the past 33 years: Three Mile Island (a Pressurised Water Reactor) in 1979, Chernobyl (a RBMK design) in 1986, and the three Fukushima Daiichi units (Mark 1 Boiling Water Reactors) in 2011. Based upon these five meltdowns, the probability of significant accidents is in fact one core-melt for every 2,900 years of reactor operation.

Put another way, based upon observed experience with more than 400 reactors operating worldwide, a significant nuclear accident has occurred approximately every seven years.

The theory of nuclear safety espoused by the nuclear power sector has given regulators, reactor operators, and the public a false sense of security. For industries that require a high level of reliability, such as aviation and nuclear generation, institutional failures are the major contributor to real-world accidents. Surveys of nuclear and other high-reliability industries show that 70% of real accident rates are caused by institutional failures. Despite this, the probabilistic risk studies produced by reactor operators to predict the frequency of component failures leading to radioactivity releases do not take into account failures of operators and regulators overseeing the plant. The empirical evidence shows that reactor accidents are more than one order of magnitude more likely than predicted by the nuclear industry's modelling. This historical record clearly contradicts the industry's claim of nuclear safety. Instead of being low-probability events as asserted by the nuclear industry, reactor meltdowns are regular events with significant consequences.

Failure of human institutions

In Japan, the failure of the human institutions inevitably led to the Fukushima disaster. The risks of earthquakes and tsunamis were well known years before the disaster. The industry and its regulators reassured the public about the safety of the reactors in the case of a natural disaster for so long that they started to believe it themselves. This is sometimes called the Echo Chamber effect: the tendency for beliefs to be amplified in an environment where a limited number of similarly interested actors fail to challenge each other's ideas. The tight links between the promotion and regulation of the nuclear sector created a 'self-regulatory' environment that is a key cause of the Fukushima Daiichi disaster.

It is symptomatic of this complacent attitude that the first concerns voiced by many of the decision makers and regulators after the accident were about how to restore public confidence in nuclear power – instead of how to protect people from the radiation risks. This has also been the case with the UN's IAEA,

which failed to prioritise protection of people over the political interests of the Japanese government, or over its own mission to promote nuclear power. The IAEA has systematically praised Japan for its robust regulatory regime and for best practices in its preparedness for major accidents in its findings from missions to Japan as recently as 2007 and 2008.

Lessons to be learned

The institutional failures in Japan are a warning to the rest of the world. These failures are the main cause of all past nuclear accidents, including the accident at Three Mile Island in the US and the disaster at Chernobyl in Ukraine.

There are a number of similarities between the Chernobyl and Fukushima nuclear disasters: the amounts of relocated people, and the long-term contamination of vast areas of land. Also the root causes of the accident are similar: concerned institutions systematically underestimated risks, other interests (political and economic) were prioritised over safety, and both industry and decision makers were not only fatally unprepared, but were allowed to establish an environment in which they existed and operated without any accountability.

Governments, regulators and the nuclear industry have stated they have

learnt big lessons from the past. Yet, once again they failed to deliver. How confident can we be that the same will not happen again?

The report "*Lessons from Fukushima*" is available at:

<http://www.greenpeace.org/international/en/publications/Campaign-reports/Nuclear-reports/Lessons-from-Fukushima/>

Source and Contact: Greenpeace International, Ottho Heldringstraat 5, 1066 AZ Amsterdam, The Netherlands
Tel: +31 20 718 20 00
Web: www.greenpeace.org

COMPARATIVE ANALYSIS OF RESPONSES AFTER CHERNOBYL AND FUKUSHIMA

The worldwide reactions on the nuclear disaster at Chernobyl (Ukraine, 26 April 1986) were quite different in different countries. So were the worldwide reactions on the nuclear disaster at Fukushima (Japan, 11 March 2011). On both governmental level as well as on a public level. This article is a comparative overview of the worldwide responses to both disasters, with (West-) Germany and the Netherlands as amplified examples.

(743.6233) Laka Foundation - It is clear it will take some time to analyze the precise consequences of the Fukushima nuclear disaster on a political level, as well as for the future of nuclear power in general. Nevertheless, this is a first attempt, focusing on the differences compared to Chernobyl in two neighboring countries. But first a brief overview of the worldwide responses.

Reactions after Chernobyl

After *Chernobyl* many countries decided to cancel the (planned) construction of (new) nuclear power plants. Italy was the only country which decided to close their nuclear power plants after a 1987 referendum. The shutdowns of the East-German nuclear power plants during the German reunification (1990) and Lithuania's only nuclear power plant Ignalina (2009) – a Chernobyl-type reactor - in accordance with Lithuania's accession agreement to the European Union could be considered as a delayed impact of the accident in Chernobyl.

Chernobyl caused much fear among the public and has seriously limited the worldwide expansion of nuclear capacity for a long time. After Chernobyl until now, only China, Iran, Mexico and Romania have completed construction of their first nuclear reactors and thereby entering the select group of countries with nuclear power reactors. Particularly in the United States the partial

melt-down in one of the reactors of the Three Mile Island (TMI) nuclear power plant in Harrisburg (29 March 1979) had grave consequences. The support for nuclear power dropped substantially in the United States and elsewhere in the world, which was again amplified after *Chernobyl*.

However, there were and there are also many other factors involved on influencing the state of the nuclear capacity. On the one hand the oil shocks in the 1970s led to renewed concerns about energy security. For example as a consequence of the oil crisis of 1973-4 France started to launch a large nuclear energy program to diversify its economy away from oil. On the other hand, skyrocketing oil prices led to global inflation and high interest rates making nuclear power much less competitive. High inflation led to sagging economies and falling demand for electric power making earlier assessments of electric power supply/demand projections obsolete. Such periods of economical crises happened in the 1970s, in the early 1980s, the years after *Harrisburg*, and again with the nuclear disasters at Fukushima in 2011.

Only many years after *Chernobyl*, from the end of the 1990s, the (worldwide) support for nuclear power started to grow, because nuclear energy was presented as a carbon neutral energy

source that would be of great importance to reduce the carbon dioxide emissions. More and more people began to believe in nuclear power as an option to reduce these emissions, although worldwide support for nuclear power has always been limited. In a whole range of non-nuclear nations – in February 2012 according to the World Nuclear Association nearly 45 countries – a nuclear power program is "under serious consideration". A remarkable (and highly unrealistic) number when you keep in mind that only 10 countries started to generate nuclear energy for the first time since the end of the 1970s; after the accident at Three Mile Island. (see Table 1)

That means that not a single country started a nuclear power program (the construction of its first nuclear power reactor) since Chernobyl; in fact, only two (China and Romania) after the 1979 accident at TMI.

Even in the past decade – long before *Fukushima* - it was already clear that nuclear energy can't be a panacea for carbon reductions in the future. This cheap PR trick of the nuclear industry is aimed to generate a nuclear renaissance. But unsuccessfully: there was no nuclear renaissance (see Table 2). As of March 1, 2012, there were 436 nuclear reactors operating in the world - eight fewer than in 2002. The International Atomic Energy Agency currently lists 63

Table 1: Emerging nuclear countries

Country	Start construction first NPP	First power of first reactor	Number of reactors (as of January 2012)
Slovenia ¹	3-1975	10-1981	1
Brazil	5-1971	4-1982	2
Hungary	8-1974	12-1982	4
Lithuania ²	5-1977	12-1983	-
South Africa	7-1976	4-1984	2
Czech Republic ³	1-1979	2-1985	6
Mexico	10-1976	4-1989	2
China	3-1985	12-1991	16
Romania	7-1982	7-1996	2
Iran	5-1975	11-2011	1

¹ By then part of Yugoslavia; ² By then part of the Soviet Union; ³ By then part of Czechoslovakia

reactors as “under construction” in 14 countries. By comparison, at the peak of the industry’s growth phase in 1979, there were 233 reactors being built concurrently. In 1987, 137 reactors were listed under construction. In 2008, for the first time since the beginning of the nuclear age, no new unit was started up, while two were added in 2009, five in 2010, and seven in 2011. In the European Union, as of March 1, 2012, there were 143 reactors officially operational, down from a historical maximum of 177 units in 1989.

24 nuclear reactors by 2025, lowering France’s dependence on atomic power to 50 percent, and the immediate halt of the oldest plant at Fessenheim. Italy has declared again by referendum to remain a non-nuclear nation. There are also non-nuclear nations and nations with little share of nuclear power which declare to go on as usual with their nuclear ambitions, such as Czech Republic, Turkey, Lithuania and the Netherlands. They argue that earthquakes like in Japan don’t exist in their areas and that the new genera-

Table 2: Number of reactors 1979, 1987, 2012

Nuclear Power Status	31-12-1979	31-12-1986	31-12-2011
Units in Operation	234	396	435
Total net MWe	120,427	272,315	368,000
Units Under Construction	226	137	63
Total net MWe	205,700	121,645	61,000

Source: IAEA / ENS

Reactions after Fukushima

Just like with **Chernobyl**, the worldwide political reactions on the nuclear disaster at Fukushima (Japan, 11 March 2011) were quite different too. A group of countries with a large share of nuclear power, such as China, France, Russia, the United States and the United Kingdom don’t have any intentions to end their nuclear programs. Other countries with a large share of nuclear power have shut down older nuclear reactors (Germany, Japan) and have announced to finish their nuclear programs. Germany says that all nuclear power stations will be closed in 2022 and Switzerland in 2034. Japan hasn’t fixed a date, but declared to stop building new nuclear power reactors. The French *Parti Socialiste* (Social Democrats) and the French Greens have agreed upon a joint position on the future of France’s nuclear power. The Greens will support the PS candidate François Hollande in the next spring’s presidential elections in return for his promise to shutdown

tion of nuclear power reactors is much safer than the 1971 built nuclear power station at Fukushima Daiichi.

Also the worldwide reactions from the public were quite different in different countries, with the exception of Germany which always has had a large anti-nuclear movement. In India, Italy, Spain, Switzerland, Taiwan and the U.S. the resistance against nuclear power has clearly increased. In other countries the group of skeptical people has clearly increased. Such as in France: 40 percent of the French are 'hesitant' about nuclear energy while a third are in favor and 17 percent are against, according to a survey by pollster Ifop published 13 November 2011.

Comparison of (West-)Germany and the Netherlands

At first sight (West-) Germany and the Netherlands - two neighboring countries - very much look like the same. At least on cultural and economic area. However, there are clearly visible dif-

ferences (sometimes even opposite to each other) in the way they dealt with the nuclear disasters at Chernobyl and Fukushima. On governmental level as well as on public level. The reactions on Chernobyl and Fukushima are first described and the differences then analyzed.

West-Germany after ‘Chernobyl’

Due to weather patterns, and distance to Chernobyl, (West-) Germany was more contaminated than the Netherlands. Although the German authorities took some measurements and precautions to protect citizens from radiation (closure of schools, kindergartens, etc.) a considerable part of the public viewed those precautions with suspicion, convinced that it was not enough and only meant to defend the vested interest of the nuclear sector.

That feeling was further fed by the fact that the federal government - a center right wing coalition of Christian Democrats (CDU/CSU) and Free Democrats (Liberals, FDP) - didn’t falter about their position on nuclear power. The FDP remained the party of the status quo: cancel nothing, construct nothing further. It was left to the Christian Democrats, the largest single party, with 40% of the votes, to decide how the country should react to this unexpected threat from a foreign disaster. Meanwhile the political parties were in the position of having to fight a number of state elections, the first only a few weeks after the disaster, and a federal election in January 1987. In July 1986, the death sentence for the fast breeder reactor Kalkar was pronounced by Reimut Jochimsen, Social Democratic Economics Minister in Northrhine-Westphalia. He said he spoke not as a politician but as a licensing authority according to the German Atomic Energy Act. According to Jochimsen Kalkar has dangerous similarities to Chernobyl. The Social Democrats (SPD), once the nuclear industry’s supporters, opted in August for closure of all nuclear stations in ten years, starting in 1988, and an end to federal subsidies for nuclear power, except for research related to spent fuel disposal and safety. The Greens stayed even more resolutely anti-nuclear. The first Green politician to be appointed as a minister in a state government (Hessen, 1985), Joschka Fischer, was taking action against a plutonium fuel plant at Hanau for non-compliance with the letter of regulatory procedures. For all that, yet all existing nuclear projects in West-Germany went on as usual. And remarkably, even several reactors were connected to the grid in the following

year. The controversial Brokdorf reactor was put into operation a few months after Chernobyl and connected to the grid in October 1986. In 1987 the nuclear power plant in Mühlheim-Kärlich (first criticality 6 weeks before Chernobyl) was connected to the grid and the THTR reactor in Hamm-Uentrop went into commercial operation. This thorium reactor was synchronized to the grid in 1985 and started full power operation in February 1987 and it was shut down definitely in autumn 1989. Despite the large opposition to nuclear power the Christian Democrats won the 1986 elections in most states and the federal elections in January 1987.

The West-German anti-nuclear movement was already a big social movement before and continued to be that after the Chernobyl accident. The movement was mainly focusing on Gorleben and Wackerdorf. Several very large demonstrations during 1985 and 1986 have been staged to protest the planned commercial reprocessing plant at the Bavarian village, 100 km north of Munich. In the Pentecost weekend (7 & 8 June, 1986) about 100,000 people marched to the Wackersdorf construction site. At the same time, in Northern-Germany, some 70,000 gathered to protest the completed but not yet started Brokdorf reactor outside Hamburg. Police arrested 800 demonstrators and 60 policemen were injured, despite very strong efforts by the opponents to keep the demonstration peaceful. The police have been accused of provoking the violence.

The Netherlands after 'Chernobyl'

The Dutch government was in the process of licensing the construction of two or three nuclear power plants, when Chernobyl happened. As soon as the consequences of the nuclear accident became clear, the government – a center right coalition of Christian Democrats (CDA) and Liberals (VVD) - was taking action. The Dutch government took measurements and precautions in case of radioactive contaminations: cows were ordered inside (to avoid eating contaminated grass) and the consumption of certain vegetables (esp. spinach) was discouraged. But the most important decision was to postpone an important decision for the construction of the new nuclear power stations that was scheduled a few days later. Because of the nuclear disaster - and with elections ahead a few weeks later - these plans were postponed and later mothballed. Due to this swift reaction there was not much criticism or

suspicion towards measurements and precautions in society (quite different from Germany).

The Dutch public was concerned, but the number of demonstrators – at most a few hundred people - was not a glimpse of the masses in West-Germany or even of the recent past of the Dutch movement. At the end of the 1970s and the beginning of the 1980s there was a big anti-nuclear movement, probably the biggest social movement the Netherlands ever had. After 'Chernobyl' there was no revival. A few large environmental organizations had started a 'vote-against-nuclear' campaign for the coming national elections on 21 May. The attitude of the center right wing government, however, took the wind out of their sails. The Christian Democrats won the elections (54 seats as opposed to 52 seats for the Social Democrats, out of the 150 seats in parliament) and led to second CDA/VVD cabinet. But plans for more nuclear reactors were off the table for many years.

Germany after 'Fukushima'

Just like after the Chernobyl accident, Germany has a center right wing government with Christian Democrats and Free Democrats. Nonetheless the situation is totally different. In autumn 2010 Chancellor Angela Merkel pushed through an extension of nuclear reactor lifetimes. After the accidents in Fukushima she retract this decision: the German government announced that all the country's nuclear power plants will be phased out by 2022. This is a return to the decision taken by the previous red-green government in 2001.

Further, it is important to note here that the decision for lifetime extension of the older reactors was taken together with the *Energiewende* (energy transition) decision, which means a phase-out of fossil and nuclear power. So, Germany had decided to follow a new avenue, a roadmap to a renewable energy future. And Germany was losing speed to this future by this lifetime extension decision. Just because of this decision the resistance had grown tremendously. Perhaps, therefore the (alternative) energy movement as well as companies and famous research institutes are politicized and against nuclear power. The involved companies see clearly that they have a direct interest for their trade sector to quit nuclear energy quickly. By tradition the German anti-nuclear movement remains a big social movement, not resting before all nuclear facilities have been closed today.

The Netherlands after 'Fukushima'

At the time of the Fukushima accident, the Netherlands was, again, in the process to license the construction of new nuclear power reactors. In the decade before 'Fukushima', a growing part of the Dutch public became used to the idea that growth of the nuclear capacity was necessary to counter global warming. The right-wing government of Christian Democrats and Liberals (VVD), supported by the ultra-right wing Party of Freedom (PVV), was and still is - also after the nuclear accidents in Fukushima - of the opinion, that nuclear power is a necessary source of energy in the current energy mix.

From opinion polls it is shown that a majority of the Dutch doesn't support nuclear energy, although there is a decline in opposition compared to the early 1980's or after Chernobyl. The reaction of the anti-nuclear movement after Fukushima was diametric compared to the reaction after Chernobyl. Though the Dutch anti-nuclear movement was at death's door since the mid-1980s, there was a strong revival. A large anti-nuclear coalition was built and several actions were held, resulting in a 10,000 strong demonstration in Amsterdam on April 16. One could definitely say that the movement was gaining power again. Especially in the province Zeeland where the municipality Borsele – the location of the only nuclear power reactor and proposed site for new reactors - is situated.

How to explain?

It is striking that both countries had a center right government during both nuclear disasters and that both countries (have) reacted almost opposite at both nuclear disasters, and - after Fukushima - opposite to the reaction of their predecessors.

Despite a large and militant antinuclear opposition in Germany no apparent changes were made in government policies after Chernobyl, while after Fukushima the government totally reversed it's policy. Why did Merkel retract her decision to prolong the operational-life of the nuclear reactors after Fukushima and demand the closure of seven of the oldest reactors immediately? One reason could be that Fukushima was a welcome occasion for her to prevent a collision with the *Bundesrat*, dominated by the Social Democrats and the Greens, on the Bill about the lifetime extension of the older nuclear reactors. An elegant way to get

rid of it and to take the wind out of the sails of the Greens - which became the largest political party in the polls - with important elections ahead.

In the Netherlands in 1986 as well as in 2011 firm plans for the construction of new reactors existed. After Chernobyl the government was swift to cancel construction plans - although there was no longer a vibrant antinuclear movement - with general elections three weeks later (and staying in power). After Fukushima, despite growing opposition the government did not move an inch, claimed Fukushima had no safety related consequences for the Netherlands, and it was a matter for the private sector to decide about newbuild anyway.

It is clear the Dutch government is leaving the energy sector to the private sector market and does not want to interfere much. It has not developed a vision on future energy production and refuses to make fundamental choices towards a sustainable energy policy. The reason why the Dutch government is standing by nuclear power is partly because of feelings of *revanchismus* (revanchism) against the environmental movement. Nuclear power is being seen by the government (especially VVD and PVV) as being blocked by the environmental movement for decades and just because of that a good way to get back at the movement. Another reason for the pro-nuclear position of the government is because nuclear power has been considered and advocated as the winner in a liberalized market (and neoliberalism reigns).

Nevertheless, it is not plausible that a new nuclear power plant will appear in the Netherlands in the coming years. Utility Delta postponed the construction of a new nuclear power plant in January

2012, blaming the financial crisis and low energy prices. Overt subsidizing the construction of a nuclear reactor is not realistic for this government, while especially those political parties were very audible the last decade in claiming nuclear power was the only source of electricity without needing subsidies.

How to explain all this? Although in both societies the political debate was much polarized we observe an important difference concerning the political situation in the mid-1980's. The Netherlands came from an (what we will call) 'open' society. In the 1970s the Netherlands went through a radical upheaval. In virtually all sectors of the society mature and critical citizens took control of their own fate. As a result the Dutch government was forced and thus willing to listen more to civil society and encouraged participation. Germany of the 1980s, however, was in the end-phase of a 'closed' society. The historical legacy of Nazism drove a wedge between the generations and increased suspicion of authoritarian structures in society in the 1970's. Because of this legacy, which became imminent in the late 1960's and 1970 through to the early 1980's the German society was therefore stronger polarized (and with less participation of civil society in institutionalized structures) in this era than the Dutch society.

Though the German antinuclear movement was very big in the 1970's and 1980s, it was also more isolated and much less institutionalized than the Dutch movement in the same era or the German movement in 2011. The Greens were just coming in and (still) quite marginal, but the big difference with Germany of 2011 was the absence of a civil society against nuclear energy, like the current alternative energy movement,

the energy movement after Fukushima. There was virtually not yet a movement dealing with energy in general. The then antinuclear movement was much more a political movement, left-wing, autonomous and anti-establishment. In short, a movement on the street, not in the center of the power, or even in the periphery of the power.

In Germany after Fukushima this situation was totally different: there is a reasonable consensus on the direction to go. Only the pace was / is different. In the Netherlands, however, there was in the era after Chernobyl an (alternative) energy movement. This could well have been an (unplanned) consequence of the so-called Brede Maatschappelijke Discussie (BMD, broad social debate) on nuclear energy. This BMD was intended by the government to ease the antinuclear sentiment in Dutch society, and was to discuss - in the aftermath of the second oil crisis, in 1981-83 - Dutch energy policy in general. After (and before for that matter) Fukushima that energy movement was completely de-politicized, and not interfering in - or part of - the nuclear energy debate.

To summarize: while the Netherlands is heading towards a more 'closed' society (in which not civil society but market forces dominate the debate and decision making), in which 'renewable energy' has a negative connotation, the vast majority of Germans is convinced of the need for a 100 per cent power supply with renewable energy sources as soon as possible.

Source and contact: Laka Foundation, Ketelhuisplein 43, 1054 RD Amsterdam, The Netherlands.
Tel: +31 20 6168 294
Email: info[at]laka.org
Web: www.laka.org

CANADA TO SELL URANIUM TO CHINA

The Canadian government of Stephen Harper has chosen to override the qualms of the government's non-proliferation experts to permit a multibillion-dollar business in exports of Saskatchewan uranium to China's nuclear industry. A deal the Prime Minister announced in China on February 9, a protocol amending Canada's nuclear co-operation agreement with China to allow the export of uranium concentrate, seals far closer ties with Beijing than ever seemed possible in Mr. Harper's early days in power.

(743.6234) **WISE Amsterdam** - Canada may be seen as playing an important role in undermining the precarious nuclear non-proliferation regime -- one that has been in danger of coming unraveled for decades because of the hypocritical double standard that is

at the heart of the regime. The Non-Proliferation Treaty (NPT) makes a sharp distinction between "Nuclear Weapons States" and "Non-Nuclear Weapons States". The Treaty is frankly discriminatory and imposes different obligations on the two "types" of nations. The "nu-

clear have-nots" are required to submit to international inspections of all their nuclear facilities and must promise never to use nuclear technology or nuclear materials for weapons purposes. These requirements do not apply to the official "nuclear have" nations designated as

only five in number: the USA, Russia, Britain, France, and China. However, Article 6 of the NPT requires that Nuclear Weapons States act in good faith to eliminate their nuclear arsenals as soon as possible. This obligation has been upheld by the World Court as a legal requirement that is binding on the Nuclear Weapons States. Yet they continue to ignore it.

Any country that acquires nuclear weapons in the absence of or in defiance of the NPT -- Israel, India, Pakistan, and North Korea, for example -- are not supposed to exist. And they are not supposed to receive nuclear assistance, nuclear facilities, or nuclear materials from nations who have signed the NPT. But Canada has resumed nuclear cooperation and trade with India despite the fact that India developed nuclear weapons using Canadian technology

initially and has not signed the NPT. And Canada is now willing to sell uranium to Nuclear Weapons States like China.

The deal with Beijing has raised concerns in Ottawa, because it includes less stringent accounting for how the uranium is used than Canada typically demands, sources said. When Australia made a similar deal with China in 2008 that included less accountability, it faced criticism from other uranium suppliers, including Canada. China insisted on getting the same sort of accounting requirements for Canadian exports that it got from Australia. As well as using uranium for other purposes, it also has military nuclear programs, which are not subject to accounting or inspection.

The message seems to be that business concerns are, for the self-styled "Harper government", far more important than

nuclear non-proliferation objectives. If Canada were determined to achieve a world without nuclear weapons, she would refuse to sell uranium to any nation that maintains a nuclear arsenal unless that nation formally renounces nuclear weapons and works overtly for the total elimination of such weapons of mass destruction. For even if Canadian uranium is only used for civilian purposes, it surely frees up other uranium so it that can be used in nuclear weapons -- uranium that would otherwise have to be used as fuel for nuclear reactors.

Source: Globe & Mail, 10 February 2012 / Gordon Edwards, email 11 February 2012

Contact: Canadian Coalition for Nuclear Responsibility. c.p. 236, Station Snowdon, Montréal QC, H3X 3T4 Canada
Email: ccnr[at]web.net
Web: www.ccnr.org

HELP STOP THE RADIOACTIVE POISONING OF RECYCLING! AGAIN.

It is an environmental and economic success story that (non-radioactive) metal and other materials are recycled and reused to prevent unnecessary mining and extraction of new materials from the Earth. The nuclear power and weapons industries, their government promoters and so-called "regulators" and the international radiation establishment are threatening this success by sending radioactive metal and other materials into the mix.

(743.6235) NIRS - The nuclear industry is shifting its waste liability to the steel industry, the most successful recycling industry in the world. The Steel Manufacturers Association said in its 2009-2010 Policy Statement (*1)

"SMA opposes policies or rulemaking activities that sanction the free release of radioactively contaminated scrap metals from nuclear power plants or DOE facilities, without any additional regulatory controls. The US steel industry cannot be the dumping ground for the discards of the global nuclear age."

There has been widespread opposition to releasing nuclear waste into commons since it was first attempted publicly in 1981. The US public has stopped every *known* effort to legalize dispersing radioactive waste unregulated and out of control. Euratom, as a force in the European Union representing the nuclear industry, not the general population, has succeeded in forcing member states (even those that oppose nuclear power) to adopt regulations allowing nuclear waste to get into commerce. Before the Fukushima Daiichi reactors and irradiated fuel pools started melting

down and releasing untold amounts of radioactivity to the world, Japan had been moving to release nuclear waste from control. Since the disaster allowable contamination levels have been raised to unconscionable levels and radioactive rubble is being deliberately dispersed (and incinerated) across the country thus around the world. Canada adopted "clearance" rules without any public knowledge or input in 2008 according to the Canadian Nuclear Safety Council.

Although it did not apply to commercial nuclear power reactors, the public and the metal industry breathed a sigh of relief in January and July of 2000 when US Department of Energy (DOE) Secretary Bill Richardson banned the release of metal from any and all radioactive areas of the US weapons complex into commercial metal recycling. In September of 2011, US Department of Energy Secretary Steven Chu signed off on *reversing* the bans. We don't know how soon potentially contaminated metal from US nuclear bomb factories might enter the metal market in the US, but we do have a chance to stop it...again. In the near future we can expect an

Environmental Assessment with a brief public comment period. Unless public outrage is expressed and acted upon by decision makers, DOE will proceed to overturn both the "moratorium" and the "suspension" from the year 2000. DOE and the National Nuclear Security Administration (NNSA) refuse to provide details of the reversal in public protection, but this is not the first time DOE site managers have tried to overturn them. *Radioactive Exchange Monitor* reports that buildup of metal at the Piketon/Portsmouth Ohio nuclear weapons site pushed hard for the change. DOE had secretly adopted internal orders (Chapters 2 and 4 of Order 5400.5) in 1990 allowing radioactive materials to be released or cleared from controls to go to landfills, incinerators and reuse/recycling. In 2011 DOE replaced it with a new one (Order 458.1) which, according to the Oak Ridge Associated Universities (ORAU), requires property "release" and "clearance."

Nuclear Monitor readers are well aware that every facility in the nuclear fuel chain, from uranium mining to irradiated fuel and waste management, releases radioactivity into the air and water and

generates various amounts of radioactive solid, liquid and/or gaseous waste. The buildings themselves become radioactively contaminated. Metal pipes and components exposed to neutrons in the core of nuclear reactors become "activated," meaning that the originally-stable metal atoms are transformed into radioactive elements such as Nickel-59 and Niobium-94 with half lives of 76,000 years and 20,300 years, respectively. Radioactive Cobalt-60 with a 5 year half life thus 50 to 100 year hazardous life also forms. Some of the radioactivity lasts for such long periods of time that for practical purposes, it requires permanent isolation from our environment and living systems. In other parts of the reactor and the fuel chain, metal can get contaminated on the surface with radionuclides.

In Canada, the Bruce nuclear power reactors were refurbished. Eight radioactively contaminated steam generators were removed with the intent to ship them to Studsvik in Sweden to be melted and most of the metal released into the commercial metal recycling market. It is not possible to remove all

of the radioactive contamination, thus Canada's nuclear power waste would make its way via Sweden into everyday household and personal use items sold around the world. Opposition from over 50 US and Canadian organizations, nearly 30 Canadian local governments, and governments of First Nations along the Great Lakes and St Lawrence Seaway have slowed the shipments. Over 20 European nongovernmental organizations have passed resolutions opposing the shipments and the release of nuclear waste into metal recycling. The immediate concern is about the dangers and precedent for transporting the enormous nuclear power components on the world's largest fresh water body, the Great Lakes and St. Lawrence Seaway through treacherous waters of the North Atlantic, through the narrow straits of Denmark into the Baltic Sea to Nyköping, Sweden where Studsvik would melt and release the majority of the metal.

As the value of metals (and other materials) in the marketplace varies, the incentive to sell contaminated metal fluctuates. Regardless, selling it into

the "recycling" supply *makes* money (for the waste generator putting the public at non-consensual, secret but real risk), whereas efforts to "dispose" of it *cost* money. Disposal as regular trash is cheaper than in a licensed nuclear waste site. There is now another option that has evolved since the late 1980s-- sending nuclear waste to a "processor" (most of which are located in Tennessee, USA), paying a fee to treat and dispose or "recycle," and sometimes transfer title and liability to the processor. If you were the manager of a nuclear decommissioning project, would you throw it into the "recycle" bin or the radioactive waste bin?

*1- quoted in http://www.ccnr.org/SMA_Radioactive_Scrap.pdf
Read more: Nuclear Free Local Authorities briefing paper July 2011: [http://nfnznc.gn.apc.org/docs/briefings/A199_\(NB85\)_Canadian_waste_shipments.pdf](http://nfnznc.gn.apc.org/docs/briefings/A199_(NB85)_Canadian_waste_shipments.pdf)

Source and contact: Diane D'Arrigo,
NIRS Washington
Email: [dianed\[at\]nirs.org](mailto:dianed[at]nirs.org)

URANIUM MINING AND WATER

For Australia especially, global warming means water shortage -drought over wide areas, more evaporation. Uranium mining is water intensive. Already outback communities in Australia are being hit by water shortage, as water is being extracted from the Great Arterial Basin faster than it is being replenished.

(743.6236) WISE Amsterdam - Water use in a typical uranium mine is approximately 200 to 300 gallons per minute. In water-short Australia, BHP Billiton's Olympic Dam uranium mine has been for years taking 35 million litres of water each day from the underground aquifer, at no cost whatever. When BHP digs its new biggest hole in the world, it will pay a small fixed price for removing even greater amounts, exceeding 42 million litres.

BHP Billiton Olympic Dam mine expansion in South Australia has received a go ahead on 10 October 2011. This will create the world's largest open pit mine, over 1km deep, 4.5km long and 3km wide. Olympic Dam already consumes an inordinate amount of ground water extracted from the Great Artesian Basin every day - for free. The mine expansion will entail BHP Billiton expanding groundwater extraction and building a desalination plant at Point Lowly which will impact the only known breeding ground of the giant Australian cuttlefish, prawn fisheries and the sensitive marine

environment.

BHP Billiton proposes to increase its water consumption by an additional 200 million litres per day. Water intake from the Great Artesian Basin will increase from 35 million litres per day to up to 42 million litres per day, with the remainder to come from the proposed coastal desalination plant at Point Lowly. That's over 100,000 litres every minute - in the driest state on the driest continent on earth. The water intake from the Great Artesian Basin has already had adverse impacts on the unique Mound Springs found near Lake Eyre, which are fed by the underlying Artesian Basin, and are sacred to the Arabunna people, the traditional owners of the area. Under the Indenture Act, BHP Billiton pays nothing for its massive water intake for the Olympic Dam mine, despite recording a total net profit of US\$23.95 billion in 2011, nearly double its 2010 figure of US\$13.01 billion.

Out of sight, out of mind
Groundwater is a major resource, but

one that has been taken for granted for decades. In the past, groundwater supplies were treated as an infinite resource, and subject to an 'out of sight, out of mind' attitude. But that's changing. There's now an enormous interest in the way our groundwater resources are measured, managed and utilised. There are also concerns over issues such as over-extraction of water, pollution, wastage, allocation and licensing issues, water pricing and groundwater salinisation.

The most well-known and important groundwater source in Australia is the Great Artesian Basin, or GAB. This is a vast groundwater source that underlies 22 per cent of Australia - extending beneath the arid and semi-arid regions of Queensland, the Northern Territory, South Australia and New South Wales. It covers about 1.7 million square kilometres, and contains an estimated 8700 million megalitres (1 megalitre = 1 million liters) of water. Not surprisingly, it's one of the largest artesian water basins in the world.....

The sustainable yield of a groundwater source depends on balancing the use or discharge against recharge rates. Normally discharge of groundwater occurs through vegetation, into streams and lakes, or through evaporation into the atmosphere. Sustainable yield cannot simply be determined by a measure of the recharge rate. If water is extracted for human use at the recharge rate, discharge to other areas can be affected.....

Extraction of groundwater can also lead to salinity problems and have a negative impact on native vegetation with roots that tap into groundwater, as well as wetlands, rivers and streams. The full impact of using these aquifers as planned is not known, but is likely to reduce the rate of water flowing to support rivers and wetlands and other groundwater dependent ecosystems.

Water from the Great Artesian Basin in Central Australia is being depleted to keep residual radioactive dust from uranium mining wet in order to keep it from blowing across the continent. Seven million gallons of water is being extrac-

ted from the basin per day to keep the radioactive dust in place, according to Kerriann Garlick, a member of Footprints for Peace from Perth, Australia.

Despite its profits more than tripling in the last three years, BHP has never paid a cent for the vast amounts of water used by the Olympic Dam copper and uranium mine near Roxby Downs. Under the Roxby Downs Indenture Act BHP is not required to pay for this water usage. The Indenture Act applies specifically to the Olympic Dam mine, and provides for wide-ranging legal exemptions and overrides from environmental and Aboriginal heritage protection laws that apply elsewhere in the state, including the Environmental Protection Act and the Natural Resources Act (which incorporates water management issues).

"The Indenture Act means that the Olympic Dam mine is not subject to the same environmental regulatory framework as other industrial projects in the state," explained Nectaria Calan of Friends of the Earth Adelaide. "Additionally, by allowing BHP to take water from the Great Artesian Basin for free,

the South Australian government is essentially providing BHP with a massive subsidy," she continued.

The water intake from the Great Artesian Basin has already had adverse impacts on the unique Mound Springs found near Lake Eyre, which are fed by the underlying Artesian Basin, and are sacred to the Arabunna people, the traditional owners of the area.

As time goes by, it is growing harder for the nuclear industry to hide the toxic effects and legacy of uranium mining. But, uranium mining still disproportionately affects people who can be marginalized in some way by governments. The case against uranium mining is not only a public health and environmental issue, it is also a human rights issue.

Sources: Indymedia Australia, 12 October 2011 / www.antinuclear.net

Contact: Australian Conservation Foundation, First Floor 60 Leicester St Carlton VIC 3053, Australia
Tel: +61 3 9345 1111
Email: [afc\[at\]afconline.org.au](mailto:afc[at]afconline.org.au)
Web: www.afconline.org.au

ENERGY SECURITY FOR WHAT? FOR WHOM?

Nuclear power is necessary for the energy security of nations, nuclear advocates often declare. But many people who hear the term "energy security" are rightly suspicious of the word "security". It seems to mean so many things. What kind of security is being talked about? Whose security? Over what time scale? Does "energy security" mean having secure contracts to buy fossil fuels or uranium? Being able to project military force to defend trading routes? Protecting vulnerable centralized energy systems against guerrilla attacks? Or does it mean having enough heat in the winter? Or reducing demand? Or developing renewable energy?

(743.6237) The Corner House - A newly report written by Nicholas Hildyard, Larry Lohmann and Sarah Sexton and published by the Corner House, called "*Energy security for what? For whom?*" tries to explore the pitfalls of "energy security" as rhetoric and as policy.

Energy is never far from the headlines these days. Conflicts of all kinds – political, economic, social, military – seem to be proliferating over oil, coal, gas, nuclear and biomass. While some interests struggle to keep cheap fossil fuels circulating worldwide, a growing number of communities are resisting their extraction and use. While an increasingly urbanized populace experiences fuel poverty and many people in rural areas have no access whatsoever to electricity, large commercial enterprises enjoy

subsidized supplies. As increasingly globalized manufacturing and transport systems spew out ever more carbon dioxide, environmentalists warn that the current era of profligate use of coal, oil and gas is a historical anomaly that has to come to an end as soon as possible, and that neither nuclear energy, agrofuels or renewables (even supposing they could be delivered in an environmentally sustainable and safe manner) will ever constitute effective substitutes for them. For progressive activists, all this raises an unavoidable yet unresolved question: how to keep fossil fuels and uranium in the ground and agrofuels off the land in a way that does not inflict suffering on millions? What analytic and political tools are available to formulate democratic policies regarding "energy" that reflect these realities?

Mainstream policy responses to such issues are largely framed in terms of "energy security". The focus is on "securing" new and continued supplies of oil, coal and gas, building nuclear plants and even translating renewables into a massive export system; energy efficiency is accorded a lower priority, but transition away from fossil fuels is nowhere to be seen at all. Climate change objectives, though once at the forefront of policy responses, are increasingly relegated as concerns about "keeping the lights on" predominate.

Yet, instead of making energy supplies more secure, such policies are triggering a cascade of new insecurities for millions of people – whether as a result of the everyday violence that frequently

accompanies the development of frontier oil and gas reserves, or because the pursuit of “energy security” through market-based policies denies many people access to the energy produced. Indeed, the more that the term “energy security” is invoked, the less clear it is just what is being “secured”.

Like many other political buzzwords, “energy security” has become a plastic phrase used by a range of different interest groups to signify many often contradictory goals. For many individuals, energy security may simply mean being able to afford heating in the depths of a cold winter or having access to a means of cooking – a “logic of subsistence”. For political parties in government, it may mean ensuring that a nation’s most important corporations have reliable contracts with guaranteed fuel suppliers until the next election. For exporting countries, it may mean making certain that their customers maintain their demand for their oil or gas via long-term contracts.

The multiple meanings of “energy security” have become an obstacle to clear thinking and good policymaking. They are also an open invitation for deception and demagoguery, making it easy for politicians and their advisers to use fear to push regressive, militaristic social and environmental programs:

“Energy security is a concept notorious for its vague and slippery nature, no less so because it is bound to mean different things at different times to different actors within the international energy system.” (*1)

This multi-faceted nature makes it difficult, if not impossible, to come up with a definition that is accepted by all, which is hardly surprising given that no single term can capture realities on the ground involving different histories and

materialities.

Both the word “energy” and the word “security” have in fact become so detached from their vernacular meaning that they are themselves problems. “Energy”, usually treated today as an abstract concept from physics, makes no distinction among energies derived from wood, muscles, coal, oil, gas, nuclear materials, falling water or moving air. It ignores the diversity of things that different groups want energy for – cooking food for your family? extracting more surplus from workers? – and the different types of political struggle connected with each. It hides the different ways in which energies are bought and sold, and the differing politics of class, race, gender and nation that characterize each energy source. Measuring “energy” and “energy sources” cannot by itself help decide which types, amounts or uses of energy are more important for humanity’s future. It may even get in the way. “Security” is just as problematic. “What kind of “security”? For whom? Which kinds of security are connected with which energy sources? What kinds of strategies are required for each kind of security? How do they conflict or overlap? The word abstracts from all these questions.

By concealing differences and conflicts that have to be acknowledged and brought out into the open, it hinders effective, democratic policymaking related to agriculture, electricity, trade, aid, transport, manufacturing, housing, banking, national development and the role of the military in society.

This Corner House report explores the pitfalls of “energy security” as rhetoric and as policy. Instead of illuminating possible ways forward, the phrase (and the policies that are framed by it) obscures increasing inequality, diverts

attention from the need to slow global warming and nurtures underlying conflicts. In sum, it gets in the way of effective discussion about, and organization for, a democratic, fossil-free future. A critical examination is needed to find ways to talk about poverty, climate and other issues connected with “energy” that are more coherent and analytically fruitful as well as better attuned to progressive goals. Putting the collective security and survival of all above the individual short term gain of a few, and acknowledging the deep political, economic, social – and even psychological – entrenchment of today’s locked-in dependence on coal, oil and gas, it would be wise to start now to make transitions in how we produce and transport food and goods – how we live and organize our livelihoods, societies and economies around the world.

*1. Paul Isbell, “Security of Supply”, *Oxford Energy Forum*, Issue 71, November 2007, pp.3-6 [p.3].

“Energy security for what? For whom?” is published on 16 February 2012, by The Corner House in collaboration with Hnutí DUHA– Friends of the Earth Czech Republic, CEE Bankwatch Network, Les Amis de la Terre–Friends of the Earth France, Campagna per la riforma della Banca Mondiale and urgewald e.V.. It is available at: <http://dev.thecornerhouse.org.uk/resource/energy-security-whom-what>

Source and contact: The Corner House, Station Road, Sturminster Newton, Dorset DT10 1BB, UK.
Tel: +44 1258 473795
Email: [enquiries\[at\]thecornerhouse.org.uk](mailto:enquiries[at]thecornerhouse.org.uk)
Web: <http://www.thecornerhouse.org.uk>

IN BRIEF

Dounreay: 'significant' hot particle found on beach. Experts have discovered the most significant radioactive particle yet on a public beach two miles (approximately 3km) west of the redundant nuclear site of Dounreay, Scotland, UK. Dounreay clean-up contractor DSRL has informed the Scottish Environment Protection Agency of additional tests being carried out on a particle recovered during routine monitoring of a beach near the redundant nuclear site. The particle was detected at the water's edge at Sandside. The beach at Sandside is located. The particle - detected on February 14 - was the 208th to be recovered from the beach at Sandside in the last 15 years.

Provisional checks carried out on the beach indicated the particle had a higher than normal beta dose rate. A spokesman for DSRL said it was the first time a particle classed as significant - the highest classification in terms of radioactivity - had been found on the beach, although many had been found on the seabed and foreshore at Dounreay as well as on the site itself. Any particle with radioactivity above one million Becquerel (Bq) units is classed as significant.

Work is due to resume in May to clear particles from the seabed near the site. More than 1800 have been recovered so far from the seabed where there is evidence of a "plume" from historic effluent discharges dating back 50 years. Particles are fragments of irradiated nuclear fuel.

Dounreay Site restoration Ltd, website, February 20, 2012 / The Herald, Scotland, 21 February 2012

Defend democracy; Unite to shut Vermont Yankee down! In 2010, the citizens and legislature of the State of Vermont, with support from their neighbors in Massachusetts and New Hampshire, decided to close the Vermont Yankee nuclear reactor permanently by March 21, 2012, when VY's 40-year license expires. In 2011, Entergy, the New Orleans mega-corporation that owns Vermont Yankee, sued the State of Vermont, defying the democratic will of the people, to keep their aged, accident-plagued reactor running for 20 more years. On January 19, 2012, federal district court judge J. Garvin Murtha sided with Entergy against the State of Vermont and the people of New England. On February 18, the State of Vermont appealed Murtha's ruling. With the future of VY still hanging in the balance, nonviolent citizen action is more important than ever.

Let us make clear: We will NOT allow unbridled corporate power to deprive us of our inalienable right to live in safety on our homes, and to determine our own energy future – a future that is safe and green for our children and our children's children. Many events have taken place and will take place to shut Vermont Yankee down. The most important one is 'Occupy Entergy HQ' on March 22. There will be a brief rally at the Brattleboro, VT Commons starting at 11:00am, then a walk to Entergy Headquarters on Old Ferry Rd. in Brattleboro (3.5 miles) where there be a direct action, likely to include civil disobedience.

More information at: <http://sagealliance.net/home>

Franco-British nuclear cooperation agreement. On February 16, UK Prime Minister Cameron met his French counterpart Nicolas Sarkozy in Paris at a joint summit for the first time since their bitter clashes over Europe. The joint declaration on energy made contained a range of goals, the greatest of them being to encourage "the emergence of a Franco-British industry that is highly competitive across the whole supply chain at the international level." Most prominent in this will be the work of France's majority state-owned firms EDF and Areva and their cooperation with privately held UK firms for the construction of new reactors in Britain.

The agreement to co-operate on developing civil nuclear energy is meant to pave the way for the construction of new nuclear power plants. It was accompanied by the news of a deal between Rolls-Royce and French nuclear reactor developer Areva. Areva has asked Rolls to make complex components and provide engineering and technical services for two reactors to be built at Hinkley Point, Somerset.

But not everybody is confident that the agreement will bring much for Britain's industry. According

To Tim Fox, head of energy at the Institution of Mechanical Engineers "Although some relatively small contracts are to be awarded to Rolls-Royce and BAM Kier, it looks increasingly likely that the vast majority of the contracts involved in the manufacture and construction of the new nuclear reactors at Hinkley Point and Sizewell will go to France rather than the UK." Friends of the Earth's Energy Campaigner Paul Steedman said: "Cameron's deal today will leave British taxpayers footing a massive bill for new nuclear plants we don't need and can't afford - while EDF continues to rake in huge profits."

World Nuclear News 17 February 2012 / FOE Press release, 17 February 2012 / The Manufacturer, 17 February 2012

Meanwhile at Hinkley Point From Febr. 12 on, following an occupation of trees a week earlier, activists are occupying a farmhouse close to Hinkley Point, to stop EDF Energy trashing land for the planned new nuclear power station. Anti-nuclear campaigners have been joined by members of Seize the Day as the first residents of Edf-Off Cottage which is on the 400-acre site earmarked for two new reactors.

At the High Court on February 27, EDF Energy failed in their bid to impose an injunction to stop an alliance of anti-nuclear groups from protesting on the 400-acre site set aside for two new mega-reactors at Hinkley Point. This injunction was being sought to remove these campaigners, but it was simultaneously designed to restrict future demonstrations. The Orwellian language even prohibits campaigning groups from 'encouraging other persons' to protest at the site. Speaking on behalf of the Stop New Nuclear alliance, Kate Hudson from CND stated "It should be inconceivable that private companies could restrict basic civil liberties in this way. They are not the arbiters of the nuclear debate, nor the guarantors of our freedoms. We will fight to ensure the rights of future generations to peaceful protest and to preserve essential democratic principles."

On 10 and 11 March, one year since the Fukushima nuclear disaster began, antinuclear groups call for a human chain/blockade around the station to show "our determined opposition to new nuclear".

www.stopnewnuclear.org.uk

Spain: OK for 41-year old Garona life extension. Spain's nuclear security agency CSN has determined that the country's oldest nuclear reactor, the 468 MW Santa Maria de Garona nuclear power plant, is safe to operate until 2019, in response to a request by the industry minister to review the installation. The approval, disclosed on February 17, clears the way for the recently installed Spanish conservative government to overturn the previous socialist government's 2009 order to have the generator closed in 2013. Although the CSN said there was "no safety or security issue that should impede continued operation of the power plant", the agency added that it would still have to review any formal application by the operator to extend the installation's license, including scrutiny of its latest operating data and future security measures being considered. Garona was first connected to the grid in March 1971!

The CSN in 2009 had given authorization for the station to operate for another 10 years, but the government at the time opted instead for an earlier expiration date. Since then, new regulations have been put in place, particularly following the accident at Japan's Fukushima nuclear power plant early last year.

Platts, 20 February 2012

World oldest reactor (44 years) closed. The world's oldest operating nuclear power reactor – Unit 1 of the Oldbury nuclear power plant in the UK - has been closed after 44 years of power generation on 29 February 2012. Unit 2 was shut down in June 2011, while unit 1 was expected to continue operating until the end of this year. Plant operator Magnox Ltd announced last October that it had decided to end operations ten months early as it was "no longer economically viable."

World Nuclear News, 29 February 2012

Beznau now oldest in world; call for closure. After Oldbury's closure, Switzerland's Beznau nuclear plant holds the dubious record of being the oldest nuclear plant in the world and should be shut down, a group of environmental organizations said on February 23. Switzerland is phasing out nuclear energy but not fast enough, say the groups. They list a number of problems and point out that the company that runs it is planning to increase the earmarked CHF500 million (US\$ 557m or 415m euro) to make it safe, money they believe could be better spent shutting it down and moving to safer energy sources.
Genevalunch.com, 23 February 2012

U.S.: Fourth Legislative Attack on Grand Canyon Uranium Ban Fails... The fourth legislative attempt to block the Obama administration's ban on new uranium development across 1 million acres of public land surrounding Grand Canyon National Park died February 14, when the House rules committee ruled it out of order. The amendment was sponsored by the same three Republican congressmen who sponsored three previous failed anti-Grand Canyon legislative proposals - Jeff Flake, Trent Franks and Paul Gosar, all from Arizona. The most recent amendment sought to overturn a January decision by Interior Secretary Ken Salazar enacting a 20-year 'mineral withdrawal' that bans new mining claims and development on existing claims lacking rights-to-mine across Grand Canyon's million-acre watershed (see Nuclear Monitor 740, 13 January 2012, In Briefs). In 2010 and again in 2011, Flake, Franks and Gosar sponsored legislation that would have prohibited the Interior Department from enacting the mining ban; in 2011 they attempted to add a rider to a budget bill - their third failed attempt prior to this most recent amendment.

Over the past few years, nearly 400,000 people from 90 countries wrote the Department of the Interior urging it to ban new uranium mining around the canyon after a uranium boom threatened to bring a new wave of destructive mining threatening recreation, tourism, wildlife habitat and waters in Grand Canyon National Park. The mining ban has won wide support among American Indian tribes, regional businesses, elected officials, hunting and angling groups, scientists and conservationists.

Press release Centre for Biological Diversity, 16 February 2012

...but next attack imminent. The withdrawal of lands in northern Arizona from mining activities is unconstitutional, unlawful and violates the National Environmental Policy Act, said organisations representing the US mining and nuclear industries in a lawsuit against US Interior Secretary Ken Salazar. The suit has been filed with the US Federal District Court in Arizona by the National Mining Association (NMA) and the Nuclear Energy Institute (NEI), the US nuclear energy industry's organization. The Department of the Interior (DoI), US Bureau of Land Management (BLM), US Forest Service and US Department of Agriculture are named as co-defendants alongside Salazar, in his capacity as Interior Secretary.

The NEI and NMA argue that Salazar does not have the legal authority to make withdrawals of public lands in excess of 5000 acres, citing a landmark 1983 Supreme Court ruling that such withdrawals would be unconstitutional. Furthermore, they claim, the decision to withdraw the land is "arbitrary, capricious, and not in accordance with law." Finally, the environmental impact statement (EIS) and record of decision on the withdrawal violate the terms of the National Environmental Policy Act (NEPA) in failing to take a "hard look" at the economic and environmental consequences of the withdrawal.

World Nuclear News, 28 February 2012

Finland: Uranium mine granted permission. The Finnish Talvivaara mine today gained permission to extract uranium and process it into uranium oxide. The UO₄ would be transported away by rail and ships, possibly to Russia. The mine was opened a few years ago mainly as a zinc mine. It's using an experimental biosoaking process to extract small amounts of minerals from the ore. The company has been crippled by scandals from the beginning, with sulphuric acid and other chemicals continuously spilling all over nearby woods and lakes. The company has failed to make any profit so far and its CEO was forced to quit last year.

In a strange technocratic turn of events, the environmental authorities concluded that instead of closing down the mine, it would be beneficial to grant the mine a permission to separate the uranium from the rest of the waste so that the further spills bound to happen at least wouldn't contain radioactive materials. As a last minute effort, environmentalists tried to convince the government to at least demand a description of the separation process so as to ensure this doesn't just produce a lot more radioactive/toxic sludge. The government decided not to do so and instead just granted the permission "because it brings 40 million euros worth of investment to the area".

The local municipality and just about every major business in the area was opposed to the permission after the previous scandals and their trade being spoiled by the smelly pollution in the environment.

Jehki Harkonen, energy campaigner Greenpeace Nordic, Helsinki, 1 March 2012

Rosatom-owned company accused of selling shoddy equipment to reactors. Russian Federal Prosecutors have accused a company owned by the country's nuclear energy corporation, Rosatom, with massive corruption and manufacturing substandard equipment for nuclear reactors under construction both at home and abroad. The ZiO-Podolsk machine building plant's procurement director, Sergei Shutov, has been arrested for buying low quality raw materials on the cheap and pocketing the difference as the result of an investigation by the Federal Security Service, or FSB, the successor organization to the KGB. It is not clear how many reactors have been impacted by the alleged crime, but reactors built by Russia in India, Bulgaria, Iran, China as well as several reactor construction and repair projects in Russia itself may have been affected by cheap equipment, given the time frame of works completed at the stations and the scope of the investigation as it has been revealed by authorities.

Bellona, 28 February 2012

WISE/NIRS NUCLEAR MONITOR

The Nuclear Information & Resource Service was founded in 1978 and is based in Washington, US. The World Information Service on Energy was set up in the same year and houses in Amsterdam, Netherlands. NIRS and WISE Amsterdam joined forces in 2000, creating a worldwide network of information and resource centers for citizens and environmental organizations concerned about nuclear power, radioactive waste, radiation, and sustainable energy issues.

The WISE/NIRS Nuclear Monitor publishes international information in English 20 times a year. A Spanish translation of this newsletter is available on the WISE Amsterdam website (www.antenna.nl/wise/esp). A Russian version is published by WISE Russia and a Ukrainian version is published by WISE Ukraine. The WISE/NIRS Nuclear Monitor can be obtained both on paper and in an email version (pdf format). Old issues are (after two months) available through the WISE Amsterdam homepage: www.antenna.nl/wise.

Receiving the WISE/NIRS Nuclear Monitor

US and Canada based readers should contact NIRS for details of how to receive the Nuclear Monitor (address see page 11). Others receive the Nuclear Monitor through WISE Amsterdam.

For individuals and NGOs we ask a minimum annual donation of 100 Euros (50 Euros for the email version). Institutions and industry should contact us for details of subscription prices.

WISE AMSTERDAM/NIRS

ISSN: 1570-4629

Editor: Dirk Bannink and Peer de Rijk

With contributions of Henk van der Keur, Greenpeace International, Christina Macpherson, Diane D'Arrigo, Gordon Edwards the Corner House and Laka Foundation

Next issue (Nuclear Monitor 744) will be mailed out March 16, 2012

WISE/NIRS offices and relays

WISE Amsterdam

P.O. Box 59636
1040 LC Amsterdam
The Netherlands
Tel: +31 20 612 6368
Fax: +31 20 689 2179
Email: wiseamster@antenna.nl
Web: www.antenna.nl/wise

NIRS

6930 Carroll Avenue, Suite 340
Takoma Park, MD 20912
Tel: +1 301-270-NIRS
(+1 301-270-6477)
Fax: +1 301-270-4291
Email: nirsnet@nirs.org
Web: www.nirs.org

NIRS Southeast

P.O. Box 7586
Asheville, NC 28802
USA
Tel: +1 828 675 1792
Email: nirs@main.nc.us

WISE Argentina

c/o Taller Ecologista
CC 441
2000 Rosario
Argentina
Email: wiseros@ciudad.com.ar
Web: www.taller.org.ar

WISE Austria

c/o Plattform gegen Atomgefahr
Roland Egger
Landstrasse 31
4020 Linz
Tel: +43 732 774275; +43 664 2416806
Fax: +43 732 785602
Email: post@atomstopp.at
Web: www.atomstopp.com

WISE Czech Republic

c/o Jan Beranek
Chytlalky 24
594 55 Dolni Loucky
Czech Republic
Tel: +420 604 207305
Email: wisebrno@ecn.cz
Web: www.wisebrno.cz

WISE India

42/27 Esankai Mani Veethy
Prakkai Road Jn.
Nagercoil 629 002, Tamil Nadu
India
Email: drspudayakumar@yahoo.com;

WISE Japan

P.O. Box 1, Konan Post Office
Hiroshima City 739-1491
Japan

WISE Russia

Moskovsky prospekt 120-34
236006 Kaliningrad
Russia
Tel/fax: +7 903 299 75 84
Email: ecodefense@rambler.ru
Web: www.anti-atom.ru

WISE Slovakia

c/o SZOPK Sirius
Katarina Bartovicova
Godrova 3/b
811 06 Bratislava
Slovak Republic
Tel: +421 905 935353
Email: wise@wise.sk
Web: www.wise.sk

WISE South Africa

c/o Earthlife Africa Cape Town

Maya Aberman

po Box 176
Observatory 7935
Cape Town
South Africa
Tel: +27 21 447 4912
Fax: +27 21 447 4912
Email: coordinator@earthlife-ct.org.za
Web: www.earthlife-ct.org.za

WISE Sweden

c/o FMKK
Tegelviksgatan 40
116 41 Stockholm
Sweden
Tel: +46 8 84 1490
Fax: +46 8 84 5181
Email: info@folkkampanjen.se
Web: www.folkkampanjen.se

WISE Ukraine

P.O. Box 73
Rivne-33023
Ukraine
Tel/fax: +380 362 237024
Email: ecoclub@ukrwest.net
Web: www.atominfo.org.ua

WISE Uranium

Peter Diehl
Am Schwedenteich 4
01477 Arnsdorf
Germany
Tel: +49 35200 20737
Email: uranium@t-online.de
Web: www.wise-uranium.org

WISE/NIRS NUCLEAR

MONITOR

c/o WISE Amsterdam
PO Box 59636
1040 LC Amsterdam
Netherlands

PRINTED MATTER
MATTERE IMPRIME



TPG Post

Port betaald