Anti-Nuclear Miljömagasinet

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FOLKKAMPANJEN
MOT KÄRNKRAFT-KÄRNVAPEN
– Swedish Anti Nuclear Movement –

Miljöförbundet Jordens Vänner
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Miljömagasinet – for a socialy and ecologicaly sustainable world

The Baltic sea is the most radioactive sea in the world

Sweden has more nuclear power plants than any other country in the world (per capita).

– The Baltic Sea is the most radioactive sea in the entire world (according to best experts)

– Swedish nuclear reactors pollute the sea 100.000 times more than Russian reactors!

– USA has 400 A-bombs placed in Europe - their own experts say in no safe conditions

– Transports of English and French A-bombs on public roads are a great risk to us all!

– The EU (through Euratom) favours nuclear more than all other energy alternatives

– The European Spallation Source, if it is placed here in Southern Sweden, will be the biggest, most expensive radioactive high-risk research project ever in Scandinavia!

In other words, there are plenty of urgent reasons why you should care and update yourself on these matters – in this small magazine, we will tell you when and where the workshops take place and give you an idea of their content and invited speakers.

Radioactive threats to the Baltic Sea region – The Baltic Sea is the most radioactive sea in the entire world!

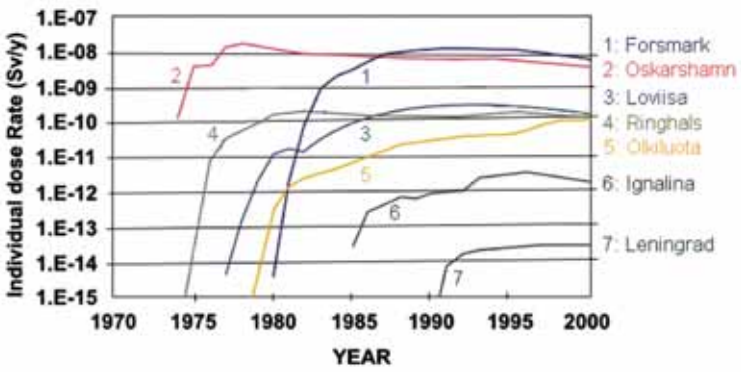
The ecosystem of the whole Baltic Sea is in crisis and many of it's problems have been brought out in public – but nobody wants to discuss our radioactive releases into the ocean or our surprising negative world record: The Baltic Sea is the most radioactive sea in the entire world! The best international experts, from the Helsinki Commission's scientific working group HELCOM MORS – who have measured radioactive substances in the Baltic Sea area for more than 30 years – stated it in their 2006 reporti:

"The levels of anthropogenic radio nuclides are higher in the Baltic Sea than in any other water bodies around the world"

HELCOM MORS, which includes radiation protection authorities and experts from the whole Baltic region, has also shown the embarrasing fact, that Swedish nuclear power plants (npp's) routinely release around 100.000 times more radioactive substances to the sea, than Russia's nuclear reactors near St Petersburg! And Finland is almost as bad – at least 1.000 times worse than Russia. (See illustration below)

The chief scientist of the Swedish Radiation Protection Authority has admitted to us (in an email, which we keep as proof), that releases from our final storage will end up in the Baltic Sea! That is all the reason anybody needs to reject this "Swedish solution". If Sweden or Finland will not listen to any protests – the Espoo Convention tells neighbouring countries that the next step is to take the matter to the International Court of Justice. Many times politicians are cowards and compromisers, and prefer not to anger their collegues and counterparts in other countries. But if they meet a strong demand from ordinary people and voters, chances are that they will act upon it!

Which reactors pollute the most?



'HELCOM MORS PRO': *The estimation of the contribution of the Baltic Sea area nuclear power plants into the annual individual doses of the critical groups of population.*

Indifferent authorities like to make sad excuses, like saying the releases from civilian nuclear reactors are insignificant, compared to the Chernobyl accident and the testing of atomic bombs in the atmosphere. But honestly – our daily routine releases should not be compared to the effect of nuclear bombs or the worst accident ever of the nuclear industry. If anything, Sweden's and Finland's reactors should be compared with routine releases from other reactors around the Baltic Sea – but then that would expose Sweden and Finland as "the bad guys"!

Everybody now say they want to "Save the Baltic Sea!" – but indifference and ignorance from our own authorities allows the radioactive pollution to continue... Now Sweden and Finland want to put the most dangerous part of their radioactive waste, the spent nuclear fuel, into "final storages" – located by the coast of the Baltic Sea! Sorry, but given the fact that this is allready the most radioactive sea in the whole world, this is totally immoral: even a child can understand that this has to be the worst possible location that is being proposed! And it is not a private matter for Sweden or Finland to decide: international conventions, like United Nations' Espoo Convention, gives every neighbouring country a legal right to object to and resist such big projects, which clearly will have a negative effect on the populations and environment of other countries.

So, our hope is to you: when you come home from this European Social Forum, make your voice heard! It is basic knowledge, that radioactivity causes all kinds of cancers and other sicknesses, even mutations and dead or deformed babies. The incredible timespans before the highly radioactive spent fuel can be considered harmless (we are talking about hundreds of thousands of years) – makes it unlikely that any kind of containers or materials will last that long, without releases.

The nuclear industry is taking out any profit they can make right now, and leaving the waste and the problems for all future generations to try to take care of. It's just not fair!

The EU is part of the problem, since "Euratom" (the nuclear industry's own spoiled brat agency within the EU) is being favoured above all other energy sectors. They have their own budget and money box, and the peoples' elected representatives – the European Parlament does not even have full powers of co-decision over Euratom. And all new members of EU are forced to pay to Euratom and the nuclear industry – even if they don't want to use nuclear power themselves, or would rather invest in more sustainable alternative energy. This is a clear and unacceptable democratic problem within the EU institution! Euratom is a relic from the Second World War and should be abolished!

You should remember, that from the beginning, nuclear power was not created as an energy solution. It was a military solution, to create the A-boms and the "superpowers" – and nuclear power is still being used to terrorize others. Later, as a bi-product and to trick people into acceptance, they started talking about "Atoms for Peace" and promising people electricity and energy so cheap, that we would hardly have to pay for it! As we now know, that was a lie: the EU is forcing all member states to pay 2-3 times more in subsidies to the nuclear maffia, than to all other energy sectors put together.

As long as Euratom remains the holy cow within EU – it will be very difficult for any alternative energies to develop and compete on equal terms. Euratom makes a joke out of EU's talk about "free marcets and fair competition". Countries that reject the nuclear option, should exit Euratom. If the Euratom Treaty remains unchanged within the proposed Lisbon Treaty (new EU Constitution) – then Euratom remains a strong reason to reject this proposal. -- "Nuclear Power? No Thanks!"

Per Hegelund
Copenhagen

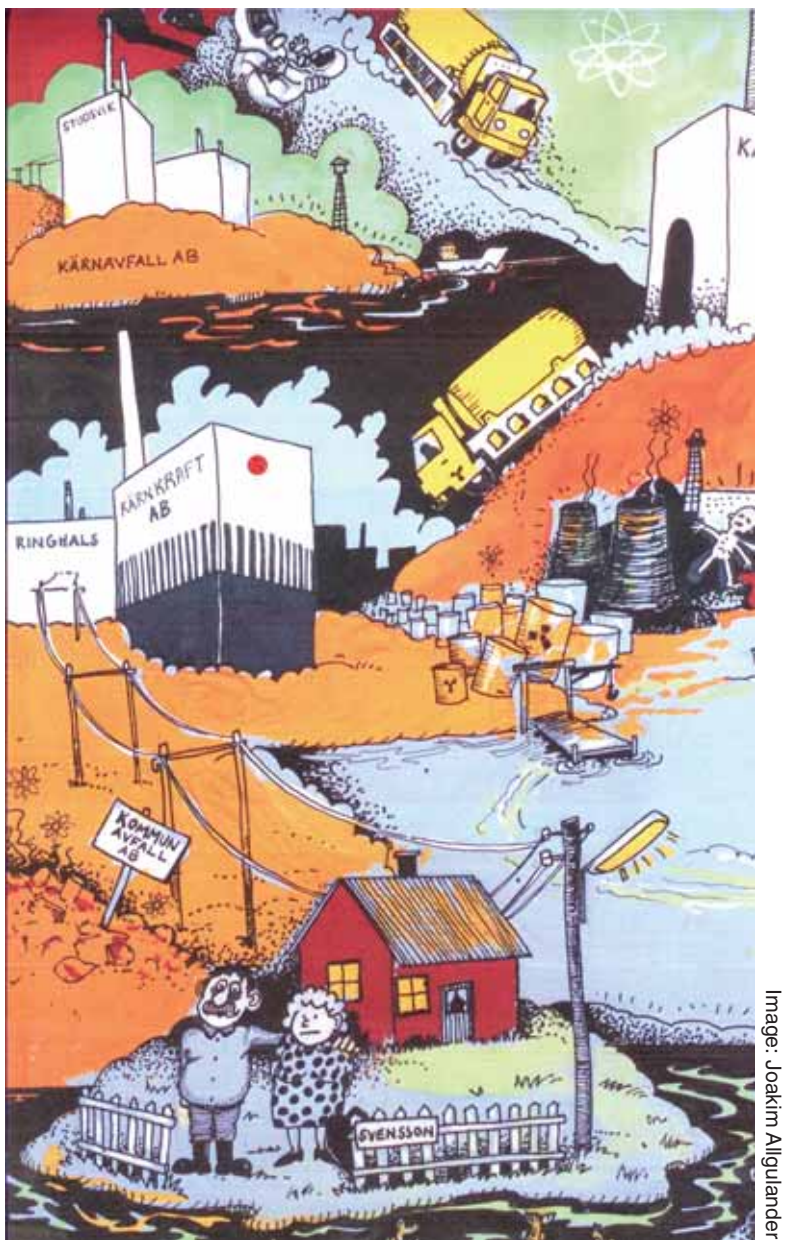


Image: Joakim Allgulander

A dark vision of nuclear waste consequences.

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The Nuclear European Spallation Source to Sweden

– and Future European Nuclear Waste graveyards

The location of ESS will be announced in December – the European Strategy Forum on Research Infrastructure (ESFRI), encouraged by the European Commission, are in the last stage of choosing the location: Lund in Sweden would be the most likely choice – if it wasn't for the obvious problems!

Environmental organizations have long been critical of the ESS, which is a nuclear installation, especially due to the safety concerns of its radioactive heavy metal targets (35-40 tonnes of mercury!), as well as its large size and costs, enormous electricity consumption and the possibility of performing transmutation research at the facility.

Poisonous mercury

Mercury is one of the most poisonous heavy metals! Globally the number of babies at risk of brain damage (with possible impacts ranging from learning difficulties to impaired nervous systems) could run into the millions. Once in the atmosphere, this hazardous heavy metal can travel hundreds and thousands of miles, contaminating places far away from where it was released. – If some future terrorists should want to punish Denmark or Sweden, ESS could spread a radioactive cloud of mercury over the entire region.

The same thing goes for worst case accidents: **the project design requires less than 0,6 seconds of electricity failure per year!** Here we have electricity blackouts that last for hours. – In any case, such a high risk, radioactive project should never be located in the most closely populated part of Scandinavia.

In Johannesburg 2002 – at the United Nations' Second World Summit on Sustainable Development and the Implementation of Agenda 21 – Sweden and many other countries worked to have all uses of mercury phased out globally. What has changed?

Transmutation

Transmutation is the dream of the promoters of nuclear industry, because if persued – it will be necessary to start building lots of a brand new type reactors and establishing a bunch of new reprocessing plants. Sellafield in England is one such reprocessing plant, which has polluted all of our oceans with radioactivity – more than any other single facility on this planet! This is just what we don't need here, on the coasts of the world's most radioactive Baltic Sea!

ESS and our local politicians insist that the link between transmutation and ESS is free fantasy. So why do we even mention it? Here are some facts:

1) The original international directors and promoters of ESS stated in their own words that **ESS "could also be used for physics and engineering research into transmutation".** (in Physics World, dec 2000 – signed by 4 ESS Executives)

2) The law in Sweden was changed recently, by lobbyists who favour nuclear power – so that research into new types of nuclear powersystems is no longer strictly forbidden (as it has been since **Swedish referendum to phase-out nuclear**).

3) **Half of the Swedish neutron scientists have now turned to transmutation research:** some +30 researchers and ingeneers are actively involved, financed by the nuclear industry (according to their own sources).

Among the strongest promoters of ESS in Sweden, you also find the strongest advocates for the theory of "transmuting" nuclear waste: examples are Prof. Waclaw Gudowski, transmutation champion of the Swedish scientific community – and liberal party ex-leader Lars Leionborg, who still wants to build 4 new reactors in Sweden (in spite of the referendum) and likes to believe in transmutation.

Rubbia's invention

The liberal-rightwing government asked the former Swedish EU Commissioner and finance minister, Allan Larsson, to investigate the possibilities of getting the European Spallation Source project to Sweden. He recommended this and now Allan Larsson has joined a group – together with Professor & Nobel Prize winner Carlo Rubbia, inventor of the ideas of transmutation! – which advise the President of the European Commission, José Manuel Barroso on energy and climate change issues. Allan Larsson also represents the University of Lund – and in his report to the government he lists 9 areas that will be particularly affected by ESS: the one he mentions at the top of the list is nuclear technology.

ESS is a protonaccelerator which bombards a target with high energy protons to release neutrons. In an accelerator-driven system for transmutation of nuclear waste – you need a "neutron cannon" like ESS.

EU interests

Once the enormous investments have been made in the European Spallation Source in Lund – there may be no turning back!

And no matter what local garanties we are given, EU interests and EU law will override national interests in the end!

If the spallation target is surrounded by an assembly of nuclear fuel, there is a possibility of sustaining a fission reaction. This is described as an Accelerator-Driven System (ADS) or an Energy Amplifier, which are the systems thought out by Carlo Rubbia.

Even if none of the local people involved with the ESS project will admit that such a plant is on the drawing board, there are scientists working on the development of drafts of such transmutation plants in many Technical Universities. And where else would they advise to place transmutation plants than at the location with billions of Euro's already invested in ESS (and with one of the world's first final nuclear waste repositories in the making. That's why it is so important to act now, before these expensive investments are established here.

People around the Baltic Sea have not been informed about the area contaminating plans that the nuclear industry has for the Baltic region. ESS may be a stepping-stone for the world's nuclear industry to provide itself with a nuclear waste cemetery, somewhere in the suburbs of EU…

Per Hegelund
Copenhagen

Further reading:

Swedish Anti-nuclear Movement – Best Critical ESS Information homepage:
http://www.folkkampanjen.se/essinfo.html

The scary EU-report "Emerging Nuclear Energy Systems" – at:
http://www.europarl.europa.eu/workingpapers/ener/pdf/111_en.pdf
– see page 42 and 52 (about Rubbia's Energy Amplifier – and an "Assessment of Partitioning and Transmutation as waste management concept")

United Nations Environment Programme – on dangers of Mercury
http://www.ens-newswire.com/ens/feb2003/2003-02-10-06.asp

http://www.world-nuclear.org/info/inf69.html - World Nuclear Association:
'Promoting the peaceful worldwide use of nuclear power as a sustainable energy resource'

Forget nuclear power, use Sun and Wind

The recent lobbying for more nuclear power as a means to stop climate change is not based on facts about climate change and energy needs.

The arguments against nuclear power have never been stronger than today. Two of the several reasons for this are summarized below.

- Nuclear power makes a negligible contribution to lowering CO_2 emissions
- Nuclear power is more dangerous than ever because of terrorism
- There is no method that solves the management of the dangerous waste
- Nuclear energy does not contribute to energy security

More expensive than the alternatives

The costs of nuclear power have greatly increased in recent years. Moody's latest number is US$7,500 a kilowatt. That is about two to four times estimates by nuclear enthusiasts only a year earlier. A new nuclear plant thus would produce electricity for about fifteen US cents a kilowatt-hour, and that does not even include for delivery costs. That is at least twice the cost of generating power from the wind, which is now about 6 cents/kWh in the US, and about ten times as much as the cost of energy efficiency measures. Even solar power will soon be considerably cheaper than nuclear power.

There has been a boom in development of renewables in the last couple of years. For instance, in 2007 about 20.000 MW wind power was added to a total global capacity of 95.000 MW. Solar power capacity has increased by more than 50% the last two years and has now a global capacity of 8.000 GW. At the same time the price for solar power is decreasing rapidly. About 2010 there will be a couple of companies that will sell solar power to utilities for US$1.000/kilowatt. The efficiency of the solar cells has been increasing every year and the manufacturing costs are decreasing all the time. One example is that the price of the specialized silicon used to make solar cells was recently as high as $300/kg. The newest contracts, however, have prices as low as $50/kg.

Energy efficiency

The cheapest way to fight climate change is however energy efficiency. According to Amory Lovins, Chief Scientist at the Rocky Mountains Institute, who received the Volvo Environmental Prize 2007, energy efficiency measures cost ten times less than building new nuclear power. According to the Swedish Program for Energy Efficiency the industry voluntarily recently saved about 1 TWH/year at an investment cost of 100 million €, i.e. much less than the new Finnish nuclear reactor in Olkiluoto.

According to a presentation held by Paolo Bertholdi at the European Efficiency Energy Conference in Austria, March 2008, by 2015 there could be a savings in the EU of 446 TWH/year, in the residential and service sectors, i.e. one third of the total electricity consumption. If the corresponding savings in industry are added, a total of more than 700 TWh/year could be saved in the EU by 2015. This corresponds to the production of 120 of the 140 nuclear power reactors in Europe.

Negligible contribution to lowering CO_2 emissions

Construction of a nuclear power station takes a long time, especially if safety is a priority. The new Finnish reactor needs about 10 years from decision to operating mode and still without reasonable safety routines. Also, there will be a severe shortage of uranium by about 2013 when the supply contract on military uranium from Russia to the US expires.

According to the book "A Lean Guide to Nuclear Power" by David Fleming (2007) the world supply of uranium ore is now so depleted that the nuclear industry will never, from its own resources and current technology, be able to generate the energy it needs to clear up its own backlog of waste. Future technologies, not yet proven, would either be too dangerous, such as the plutonium-based breeder reactor (so called generation 4 reactors) or too expensive (e.g. reactors based on thorium).

Further, nuclear power is not CO_2-free. According to studies by nuclear engineer van Leeuwen the life-cycle of nuclear power creates emissions of CO_2 between 88-134 g/kWh and will increase when poorer ores have to be mined. The poor efficiency of nuclear reactors, less than 35%, also contributes to global warming by releasing enormous amounts of hot water to air and water.

It is now time to phase out nuclear power and to phase in renewable energy. The stone age did not end because of a shortage of stones, but because better technology became available. Let us now make an end to the nuclear age.

Göran Bryntse. PhD
Chairman, The Swedish Anti-nuclear Movement

Environmentally Hazardous Nuclear Research Facility to be Built in Lund?

In September 2008, an expert group under the European Strategy Forum on Research Infrastructure will make its recommendations on the location of the European Spallation Source (ESS) (1).

These recommendations are expected to form the basis for the final decision by the ESS stakeholders, which is to be made public at a summit in Paris in December. A choice has to be made between 3 host candidates: The Basque city of Bilbao in Spain, Debrecen in Hungary and Lund in Sweden's Øresund region – with Lund as the overwhelming favourite to win the race. ESS, that is projected to be world's largest neutron scattering facility, has been under development since 1991 at the expense of at least 500 man-years. If it is built in Lund, it will be the largest research project in Scandinavian history and one of the biggest development projects ever in the Øresund region. However, the project is still haunted by unanswered questions that have derailed it in the past concerning its size, design, costs and environmental hazards, especially in case of a serious accident at the facility.

After a slow start and possibly near-death, the project took off in February 2007, when the Swedish government unexpectedly announced that it supports locating ESS in Lund and is willing to cover 30 percent of the project's construction costs. Since then, it has tried to build a Pan-Scandinavian platform to cover 45 percent of the costs together with ESS Scandinavia, the Swedish-Danish-Norwegian consortium, which initiated the project in Lund. However, it remains to be seen whether or not this platform will emerge.

A Scandinavian platform

In April 2008, the Danish government announced that it would actively support the location of ESS in Lund, consider the possibility of co-hosting the facility (2) and possibly invest a large sum in the project (3). This came as a surprise considering that the government had promised to put together a working group consisting of representatives of five Danish Ministries to coordinate a report on the perspectives of a Danish involvement in the ESS project before such a decision was made. The report, which would focus on the research, environmental, energy, health and financial aspects of ESS in Lund, was expected to be published in March 2008 (4). It was not published and critics were quick to point out, that if it had, it would have been the first independent report ever on ESS in Lund.

Thus, the government announcement was met with scepticism in the Danish research community. Almost immediately, the principals of the Danish universities rejected the idea of co-hosting ESS, arguing that Danish research funds should not be invested in the project, mainly because it would not help Denmark reach the Barcelona target of investing 3 percent of GDP in research and development by 2010 (5).

Increasing cost levels

Among the many Achilles heels of ESS is the project's unpredictable cost levels, considering that ESS possesses all the characteristics of a typical mega-project: long planning horizons, a multi-actor process with often conflicting interests regarding decision making, policy and planning, a project scope and ambition level that changes over time and unplanned events that are unaccounted for, leaving budget and other contingencies inadequate. For such projects, misinformation about costs, benefits, and risks is frequently considered to be the norm – as could be argued in this particular case (6).

With respect to the cost levels, at least 10 scenarios have been published since the first report on ESS in 1996. These mostly refer to a full ESS implementation, i.e. two target stations and 44 instruments in operation. The current proposal for ESS in Lund is based on only half the original facility, although it is still being marketed as possessing all the qualities of a fully implemented project. That is why the Swedish government in February 2007 was able to set the construction costs as low as 1.2 billion euros (7). However, a year later, according to ESS Scandinavia itself, the costs for the diminished version of the project have increased by almost 50 percent to more than 1.8 billion euros, if decommissioning costs are included (8).

This estimate does not include cost overruns, which are common in large infrastructure projects. It has to be considered that ESS is a nuclear installation and in some respects similar to a nuclear power reactor. Construction costs for nuclear reactors have doubled since 2000 and are up 69 percent from 2005 (9). The increase is mainly caused by rises in costs for labour, materials, equipment and design and engineering. Most if not all these increases apply to the ESS project.

Nonetheless, ESS Scandinavia claims to be in full control of project costs and has stated its intention of following the cost management structure of the International Thermonuclear Experimental Reactor (ITER) in France (10) (a fusion reactor project).This is far from reassuring, considering that the projected construction costs of ITER recently skyrocketed and could be expected to double (11).

Environmental concerns

Even more serious than the financial concerns are concerns about safety, relating to the ESS facility's content of radioactive heavy metal. In reality "heavy metal" probably means "mercury", which is also used in the recently completed neutron scattering facilities J-PARC in Japan and SNS in the U.S. In these facilities, which are both considerably smaller than ESS, the content of mercury in the target stations is 20 tons. ESS is expected – although this is not definitely known – to contain – in some estimates and under certain conditions – up to 60 tons of highly toxic heavy metal (12), which would become radioactive during use and has to be stored in a nuclear waste repository for 3.000 years after the decommissioning of the facility (13).

Even though four types of facility-specific accidents have been identified that could cause serious leakage (14), no risk assessments of the ESS facility or worst-case scenarios have ever been produced. Most estimates (15) set the content of radioactive heavy metal in the facility at half of the content of radioactive heavy metal in the Barsebäck 2 reactor (30-40 tons as opposed to 76 tons), although it should be mentioned that the potential release of radioactive substances does not comprise the same elements (16). In case of a serious accident, these could spread not only over the city of Lund, but the whole region, including the Danish metropolitan area. This inevitably leads to the question: What level of financial responsibility would the Swedish government and the other stakeholders in the ESS project be willing to commit to? Any responsible approach to the liability problem would require clarification of the legal and moral aspects of these issues.

The seriousness of this question is not wasted on the initiators of ESS and apparently, for tactical reasons, there seems to be a deliberate strategy on the part of not only ESS Scandinavia but also the two competing consortia to conceal the quantum of heavy metal in the facility and what it will consist of. Recently, ESS Scandinavia has stated that the final decision on the choice of heavy metal does not have to be made before 2012 (17). However, this might not turn out to be the case after all, considering that the amount of heavy metal and possibility of a mercury target is bound to be an issue during the environmental impact assessment (EIA) process, which could start as early as before the end of 2008 (18). Worst-case impact scenarios in case of a serious accident at the facility would also have to be presented during the EIA process.

Generally, the environmental concerns are exacerbated by the fact that there are currently no specific regulations aimed at large scale accelerators and spallation sources in Sweden. Furthermore, ESS Scandinavia stipulates that the ESS facility will not be defined as a nuclear installation under Swedish law (19). At least one implication of this would be that the liability of the owners of ESS in case of a serious accident at the facility will be much more limited than if this had been the case.

Investigation needed

For a long time, green NGOs have asked for an independent investigation into the impact of the ESS project before any decision on the viability of the project is taken (20) and this request is still as valid as ever.

The investigation should be comprised of an independent in-depth assessment of the justification, long-term orientation, environmental and social benefits and effects of the project. The project's local and regional safety implications should be analysed as well as the its role in the EU policy for sustainable development, especially with regards to the enormous energy consumption of the research facility, which is more than seven times the electricity consumption of e.g. Copenhagen University, an institution with more than 33.000 students and 5.500 employees (21).

Niels Henrik Hoog
Denmarke

Notes:
number specifications can be received from info@milkas.se

For further information, please see:

ESS Scandinavia website: http://**esss.se**

ESS website of the Swedish Anti-nuclear Movement: ***www.folkkampanjen.se/essinfo.html***.

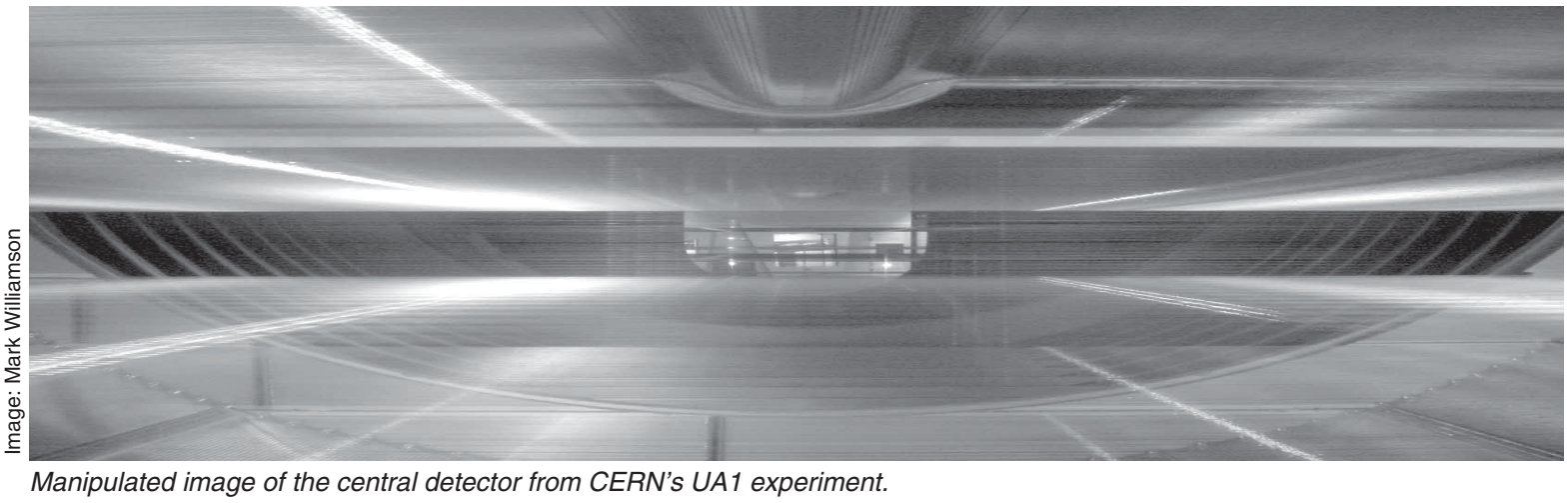

Image: Mark Williamson

Manipulated image of the central detector from CERN's UA1 experiment.

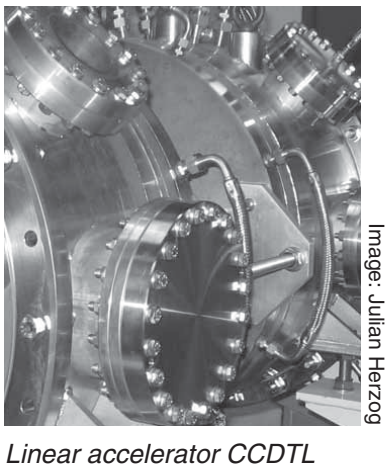

Image: Julian Herzog

Linear accelerator CCDTL LINAC 4: Prototype (detail)

Sellafield health effects

The Nuclear fuel reprocessing site at Sellafield, formerly Windscale and which began operation in 1952, has been the single source of the largest quantity of radioactivity released in Europe.

Although the amounts pumped out annually to the Irish Sea have been greatly reduced since the 1990s, the total quantities accumulated in the Irish sea sediment since the main period of operation in the late 1970s have been enormous, and in terms of area of the Irish Sea, far greater than even the surface deposition from all the atmospheric nuclear weapon testing.

Sea-to-land transfer

The historic decision by the British government to use the sea as a convenient repository was made on the basis that the material would harmlessly disperse. But this proved not to be the case. Sellafield Plutonium began to turn up in samples on land and by the 1980s enough experimental work had been done to show that there was a new phenomenon: sea-to-land transfer.

Radioactive particles discharged to the sea, drifted away and became precipitated on the coast, most particularly in areas of fine sediment, like estuaries and inlets. Examples include the Menai Strait in north Wales, Carlingford Lough in Ireland and the coast of Dumfries and Galloway in Scotland. Some radioactive elements behaved in peculiar ways: Caesium-137 travelled huge distances, being found as the main radioelement in samples from northern Norway, at the mouth or the Baltic, in Greenland and Canada. Technetium-99 concentrated in lobsters and crabs in significant amounts; Ruthenium ended up in edible seaweeds, and so on. But most alarming was that all these materials concentrated in the intertidal sediment on parts of coastlines far from Sellafield, in Ireland, Scotland and Wales. And the action of the waves caused this material to become airborne so that the particles drifted inland and were inhaled by adults and children.

Child and adult cancer

The result was child leukaemia and adult cancer along the coastal strips of Cumbria, Ireland, Wales and south west Scotland. So the material pumped into the Irish Sea did not go away: most of it stayed there in the mud: and measurements made by the British government (MAFF) of the levels of plutonium in the sea bed show that a wave of plutonium has been steadily moving across the Irish Sea since the 1980s, and the peak levels touched the north Irish Coast in the mid 1990s and have been moving steadily south since then.

The first sign of the effects was the discovery of a child leukaemia cluster in the coastal town of Seascale, near Sellafield in 1982. There was a 10-fold excess of the disease, a discovery made by a TV company, not the local health department. A government enquiry found that the radiation could not be responsible as the doses were too low. This argument has been the basis of denials of a link between radiation and child leukaemia ever since but is spurious, as it employs the health effects of external acute dose (Hiroshima) to assess internal chronic doses (e.g. inhaled plutonium, strontium or uranium).

No mechanism that accounts

A court case was taken by two of the victims in 1993, but was lost; the judge accepted that there was no mechanism that could account for the illnesses on the basis of the doses. Nevertheless, the leukemias were there, and shortly after, similar clusters of child leukaemia were found at every major nuclear site that was investigated. Most recently, a very large study of all the nuclear sites in Germany (Spix et al; Kinderkrebsregister, 2007) has found a statistically significant excess of child leukaemia in those children living inside a 5km distance from the plants.

Wales Cancer Reg. shut down

In 1997 Green Audit was leaked the small area cancer incidence data for Wales, from 1974-1990. Analysis of this, paid for by the Irish State in connection with a court case, showed a startling increased risk of adults and child cancer in the 1km strip of north Wales, where the Sellafield radiation fetches up. These results were reported by the BBC; but following the leaked data, the Wales Cancer Registry had been shut down and a new Wales Cancer Intelligence Unit removed the children from the database, claiming that the data were an error, and denied the existence of any effects.

Further work by Green Audit on numbers supplied by the Irish National Cancer Registry showed the existence in Ireland of a similar sea coast strip effect on the east (Irish Sea) coast but no effect on the south or west coasts. Denial by the WCISU of the excess childhood cancer on the Welsh coast in 1999 resulted in a Welsh TV company investigation. This investigation turned up a significant excess of child leukemias and brain tumours in the Menai coast area of north Wales where the Sellafield radiation concentrates. The names of the children were known and parents were interviewed.

The WCISU responded by saying that there was no excess: Green Audit had made a mistake in calculating the base population. But this was the WCISUs last shot: their analysis was shown to be wrong and they conceded their error in the Journal of Public Health in 2006. Currently the director of WCISU is the subject of an official complaint to the General Medical Council. The coastal strip effect which we discovered was of concern to the population of Dumfries and Galloway, that part of Southern Scotland that has a coast affected by radiation from Sellafield and also from the Uranium weapon testing range at Dundrennan in Scotland.

Scottish Cancer Registry refused release data

Chris Busby visited Kircudbright in 2005 and measured radiation: he met with the Green Party parliament member Chris Balance and suggested that the Greens try and get the small areas child cancer data. Small areas data has been routinely refused by cancer registries in Europe. Balance applied for the data and when it was refused, made a Freedom of Information application to the FoI Commissioner. The EC Freedom of Information Act became UK law in 2005. The Commissioner, Kevin Dunnion, upheld the complaint and ordered the Scottish Cancer Registry to release the data: they refused and appealed to the Scottish appeal court, the Court of Sessions.

Levels of child leukaemia 25+%

In 2007 the appeal court upheld the FoI decision and ordered the data to be released. The cancer registry appealed to the British House of Lords. In 2008, the Lords discussed the issue: the British government made the unheard of step of sending an official to the Lords hearing. The Lords overruled both the Scottish legal decisions, an absolute scandal, and one that I find it hard to imagine that the Scottish can accept. In the middle of all this, the Scottish Cancer Registry published their own analysis of the small areas data for 1974-2003. Their results showed that the levels of child leukaemia were 25% higher in the area of Dumfries and Galloway than in the whole of Scotland, but the highest levels were not near the coastal strip.

Effects found in Wales, Ireland, and Scotland

A quick examination of their results showed that the trend was affected by the Chernobyl fallout which fell inland. Once this was removed, the sea coast effect from Sellafield, found in Wales and Ireland, was also there in Scotland.

I wrote a paper which was published in the same journal, after some argument. So this is the current position. It is clear that the authorities are aware of the cancer excesses caused by inhalation of radioactivity from Sellafiled. They are desperately trying to hold back the flood gates of evidence.

Sellafield effects in Norway

The radioactivity will continue to be driven ashore and cause cancer. Coastal populations of the Irish Sea will continue to suffer, especially children. The data obtained from the Welsh TV company S4C showed an 18-fold excess of child leukaemia, also brain tumours. We may assume that material dispersed further afield, maybe as far as Norway it will also have an effect: only epidemiology will show. There will be effects on sea life and bird life also.

Hundreds of thousands of years

These radioactive materials cannot be destroyed, and many have long half lives, hundreds of thousands of years. All we can do is ensure that the truth about these processes becomes available so that nuclear power is stopped: and to do this we have to have access to small area cancer data. The behaviour of the cancer registries, and the disgraceful overthrow of the FoI decision in Scotland, makes it clear that the Bristish Government are well aware of the results of their foolish historic decisions over Sellafield and are desperately involved in a cover-up. Their agents, the Wales Cancer Intelligence Unit, and the Scottish Cancer Registry (Information and Statistics Division) have clearly been shown to be either biased or stupid.

Prof Chris Busby
www.greenaudit.org
www.euradcom.org

Chernobyl as a holocaust

For 50 years the nuclear establishment has claimed its discharges are pretty harmless.

The nuclear establishment admits that there's no safe dose, so that even the smallest amounts of radiation can cause genetic damage leading to cancer, leukaemia or birth defects, but according to the official view not even the Chernobyl disaster has caused any visible effects. Officially, it caused the deaths of a few highly irradiated firemen and up to 2000 additional thyroid cancers, which are mostly treatable. And that's it, they say.

The reality is quite different. The nuclear age is also the cancer age. The first visible population effect was the increase in childhood leukaemia which began during World War One and rose in line with radium production for decades. The Cold War orgy of nuclear bomb tests, which spread man-made radioactivity all round the globe, was accompanied by a change in infant mortality rates which accounted for the deaths of tens of thousands of children. Variations in the amounts of radioactive fallout were reflected in subsequent cancer rates and we are now living through a cancer epidemic.

Cancer and leukaemia clusters have been found in association with nuclear sites and with places where radioactive discharges are deposited in, for example, mud banks and estuaries.

The effects of Chernobyl, especially those reported from Belarus, the Ukraine and Russia, are a holocaust.

Officials deny that any of this can be attributed to radioactivity but, as llrc.org scientists explain , the denials have no scientific basis. This is because

- the underlying scientific model is based on external irradiation
- risk is quantified in terms of dose
- dose is now acknowledged to be meaningless for many types of radioactivity when they are inside the body.

This is the biggest and longest running health scandal of all time.

www.llrc.org

VISIT MILKAS CHERNOBYL-FILMS SEMINAR SUNDAY 13.00

Anti-nuclear movement sticker.

Final disposal of spent fuel in Olkiluoto

In Finland a final repository for spent fuel is being built in Olkiluoto. The principal decision was taken in Parliament in May 2001 by the votes 159 – 3 (out of 200).

At present there is an EIA procedure running for the enlargement of the repository since a fifth reactor is being built and 1-3 more are being planned.

More hazardous fuel

A problem that however, is not being discussed at all is that the EPR design envisage burn-up rates of 60 GWd/tU (gigawatt-days per ton of uranium) or even more. At these rates, uranium fuel rods should burn for around a year longer than today's best burn-up fuel. The high burn-up fuel uses more enriched uranium, and leaves it in the reactor for a longer time. This gives more output from the fuel, but causes spent fuel more hazardous and problematic to manage.

An IAEA guidebook published in September 2007 states:

"The higher burnup of fuel has a significant impact on the choice of the storage option and on the design of storage systems, due to the increased decay heat, inter-alia, which is roughly proportional to burnup, imposing a higher cooling load to the storage system."

The KBS-method

In Sweden and Finland the final repository model is based on the KBS-method which means that the spent fuel will be deposited in cupper capsuls in the bedrock 400-500 deep. In Sweden scientists in October 2007 warned that the capsuls might corrode before the radiation has become harmless. According to one of the scientist, Peter Szakálos, from the Royal technical highschool, the capsuls might collapse already after 1.000 years. Since Olkiluoto is situated at the coast of the Gulf of Bothnia a leakage could have disastrous effects for the whole Baltic Sea.

Swedish repository time table

According to Sven Bengtsson, the highest judge of the Environmental Court in Sweden (Naturvårdsverket, Miljöaktuellt april 2007) SKB in Sweden might only start building the Swedish repository in 2022 due to the ongoing debate about location and method.

The building application for the repository will be handed over to the Environmental Court in 2009.

It will be the largest environmental court procedure of all times in Sweden.

Several extremely difficult questions must be answered about the long-term environmental safety of the KBS-model, amongst others the ability to withstand forces of repeated glaciation cycles and groundwater conditions of the bedrock.

Finnish repository time table

The time table in Finland is much faster:

Mid August the depth of the thunnel was 296 metres and the length was 3.121 metres.

In 2009 the depth will be 400 metres and in 2011 some 500 metres.

In 2020 the loading of waste will start.

Costs: 60 million euros.

In Sweden there is a debate going on about the final repository for spent fuel. NGO:s are integrated in the debate through "samråd" (meetings with local decision makers, repository company SKB, different authorities, etc). The NGO.s get economical support for their activities.

In Finland there is no such process and there is no debate what so ever about the repository being built in Olkiluoto.

First operating final repository

The final repository in Olkiluoto will most likely will be the first operating one in the whole world. In IAEA as well as European Union circles it has many times been mentioned that the best solution for the highly radioactive waste might be to have only a few common repositories in the world. If Finland as the first country in the world opens a repository it is very likely that this repository also will have to open up for spent fuel from other parts of the EU.

Approximately one third of the nuclear power reactors operating in the EU will close over the next two decades. This will highlight the problems with waste and decommissioning like never before.

> "It is naïve to believe that the declaration Sweden (and Finland) made before joining the EU in 1994, about not accepting intermediate or final disposal of foreign nuclear waste on Swedish ground, would have any value."

At a seminar in Brussels in February 2005 energy commissioner Andris Piebalgs stated that the EU has to come to a solution concerning spent fuel. He called for joint undertakings to find geological solutions. He stated (SPEECH/05/122):

"The second area to be addressed by the Joint Undertaking is that of geological disposal. I am not advocating new research into the technology itself, but research on the suitability of very specific sites or geological formation to act as a host for a repository. The underground laboratories in operation or under construction in some Member States are excellent examples of what other Member States should also consider doing."

Naïve to believe in declaration

In June 2006 Per Cramér, professor of international law, specialized in European integration law at the University of Gothenburg commented on the declaration Sweden (and Finland) made before joining the EU in 1994 about not accepting intermediate or final disposal of foreign nuclear waste on Swedish ground. He stated that it is frankly speaking naive to believe that this declaration would have any legal value. It would be discrimination to forbid one of the founding principles of the EU – namely free movement of services and goods – on the basis of national interests. According to him it is utmost important to look into this matter and to get at least a political confirmation concerning the legal status of the declaration.

In October 2006 the German Capital business magazin asked "what to do with radioactive waste from German nuclear power plants?" Olkiluoto was mentioned as a suitable place – for a suitable payment. The nuclear friendly climate was praised and the article refered to the scarce population and the poor economic situation in the area. Also the former energy commissioner Loyola Palacio was mentioned who behind closed doors already years ago spoke about common repositories for the EU.

At the AGM of E.ON in Essen in May 2007 the CEO Wulf Bernotat answered a question posed by me concerning spent fuel. He stated that if E.ON produces spent fuel in Finland it will be finally disposed of in Finland. Concerning spent fuel produced elsewhere by E.ON he stated that this is a political question to be solved in Finland.

The parliamentary Assembly of the Council of Europe published in September 2007 a report on "Radioactive waste and the protection of the environment". The report reminded about "the 2005 Tokyo International Conference on Safety of Disposal of Radioactive Waste Disposal that noted that, since many countries have comparatively small volumes of radioactive waste, it would be disproportionately costly for each of them to develop its own geological repository. For this reason, studies have been initiated at regional level, supported by the European Union, to examine the feasibility of a regional repository in which the waste from several countries could be placed."

"Forsmark as final repository of Europe"

Göran Sundqvist, sociologist at the univeristy of Gothenburg, has followed up the waste question for 15 years. In an interview in June 2008 he stated that "Forsmark might become the final repository of Europe". Even if the Swedish law today prohibits such a solution the question will become extremely important within the EU in the near future. According to Sundqvist EU would be stupid if it would deal with this matter by force and directives. Instead it is very likely that they will call for common responsibility and co-operation.

Considering the fact that new reactors in Finland to a great extent would produce electricity for export and that the big European energy companies in one way or another are involved with each other, the spent fuel produced can be considered as foreign waste. The next step – to regard spent fuel as common goods and repositories as common service – is not too far away!

Ulla Klötzer

Women Against Nuclear Power – Finland
Women for Peace – Finland

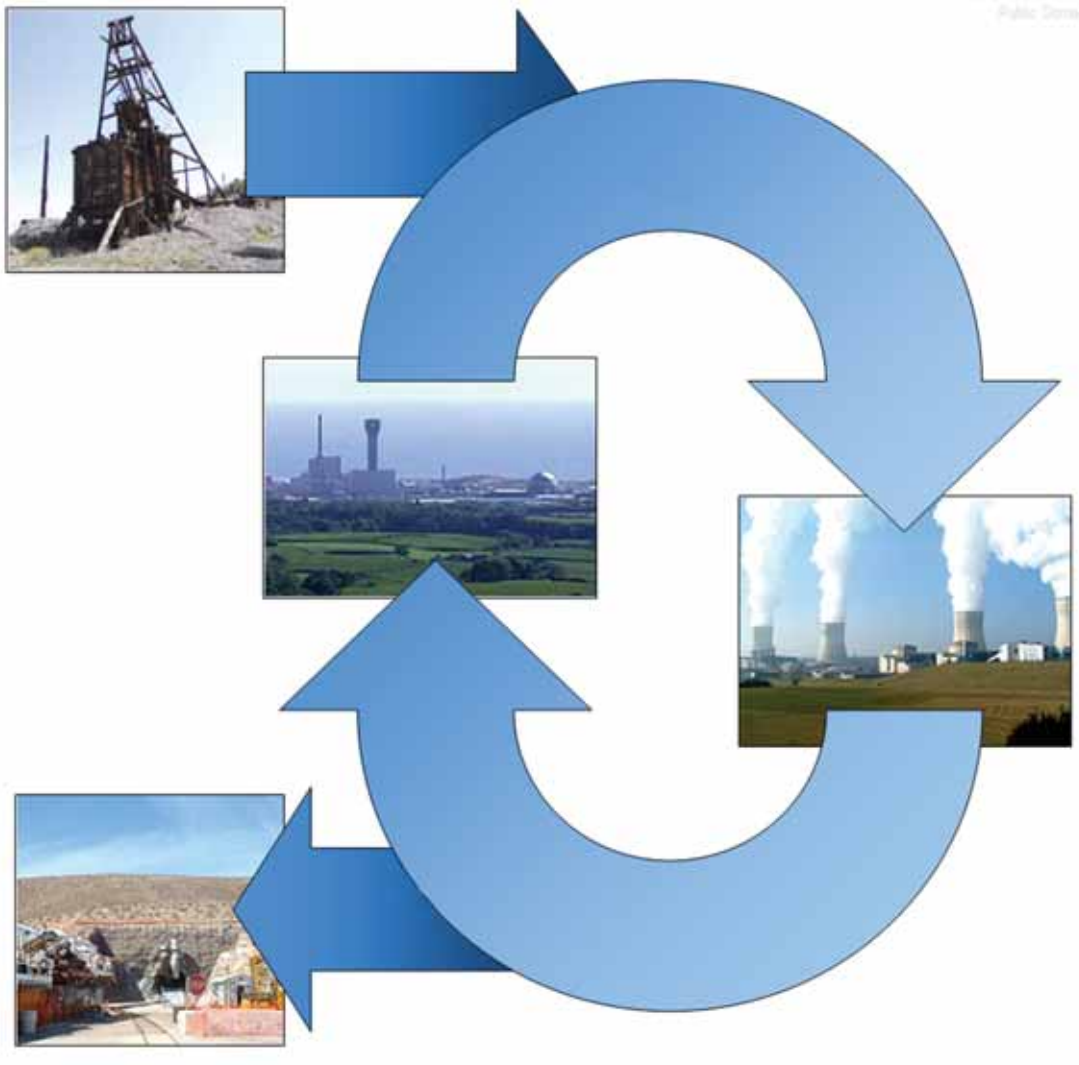

Image: Tungsten

Illustration of the nuclear fuel cycle.

The illusive ”final solution” of high-level nuclear waste

High-level nuclear waste remains utterly toxic for at least 100.000 years. Hence, this is the minimum time required for a total isolation from the biosphere if the waste should be stored in the bedrock (as proposed in Sweden and Finland).

In this situation, we must ask us: is it really feasible to produce anything today that has, with full safety guarantee, to remain intact for at least 100.000 yeas? A period into the distant future of 100.000 years is simply an immense time period. How can we humans today seriously cover such a period with meaningful safety frames? Common sense reacts spontaneously and says; no, this is beyond human capacity. And, indeed, this view is strongly supported by modern scientific achievements.

The nuclear industry, however, has other frames. Nuclear power is not allowed to be in operation, unless the handling of the high-level waste is solved. It is therefore quite logical that this industry feels they have to claim or, at least, portend that the handling is “solved” and that they can build a “final repository” at 500 m depth in the Fennoscandian bedrock, which, they promise, “will last for at least 100.000 years” (the so-called KBS.3-method).

A dead-end methodology

If the Fennoscandian bedrock today may illusively be regarded as stable, this can no longer be the case for the time of deglaciation (some 10.000 years ago) when the rate of uplift was in the order of 1 mm per day and it was a high-seismic area with frequent high-magnitude earthquakes (58 recorded up to today), intensive bedrock fracturing and faulting, repeated tsunami events (16 recorded up to today, and events of large-scale bedrock fracturing due to violent venting of methane (from sudden phase-transitions from methane hydrate). All those processes forcefully invalidate previous claims that a storage of high-level nuclear waste in the bedrock according to the KBS.3-method may remain intact for the immense time period of “100.000 years or more”. SKB:s “earthquake scenario” falls flat, and so does their so-called “respect distance”.

SKB:s claim of a maximal chance of only 0.1 magnitude 7 event in 100.000 years must be substituted by something like: 100s of M 7 events, 10s of M 8 events and probably even some M 9 events over a 100.000 period. Their respect distance (the distance between their waste disposal form regional faults) of only 50-100 m must be substituted by 10–50 km. The new hazard possessed from explosive methane venting has to be assessed.

This is the situation in view of modern geodynamic achievements. Our data remain observable in the field, whilst SKB:s base-date refer to computer-modelling. Our basic research was undertaken in an international group of experts. Our data have been carefully described and published. They have been demonstrated for experts at several international field excursions, not least at the 33rd International Geological Congress in Norden, 2008, with additional symposia and a 1-day course.

In conclusion, modern geodynamical achievements do not allow us to remain in the old illusion of a guaranteed “safety for 100.000 years or more” of a KBS-3 repository. This way is now revieled to be “a dead-end”.

A possible way forward

We seem unable to get rid of waste, only able to put it out of sight. But this is not good enough, especially not in the case of nuclear waste that remains deadly toxic for 100.000 years, or even more. In this situation other factors emerge as vital and central; viz. remained control and freedom of action. This gave birth to the idea of a Dry Rock Deposition (DRD) where the waste is to be stored in the bedrock under dry conditions with remained control and accessibility. This means that the waste can still be repaired should anything go wrong, can still be utilized should our energy demand call for such an action and technology have improved adequately, can still be destructed should future technology so allow, and can simply be moved should a future threat appear or a new storage technology be invented. If the transmutation technology would become safely operational, an application of this technology would, under energy production, bring the toxic leftover down to about 1/10 of the original waste volume. This 1/10 would then fit in two super-deep boreholes.

I do not claim that this is a solution. But it is a possible way forward. And, it is to do the best possible in a situation forced upon us.

Nils-Axel Mörner
Paleogeophysics & Geodynamics, www.pog.nu
Sweden

Image: Magnus Elinder

Earthquake evidence: liquefaction. Turinge Grusgrop, Sweden.

FIGURE 1, RIGHT:

Illustration of the differences between the Wet Deep Disposal of a KBS-3 repository and a Dry Rock Deposit of the DRD-method (from Cronhjort & Mörner, 2004). In the first case (left) the waste is left there “for ever” and can neither be controlled nor repaired and we have to put all out thrust in the safety of the bedrock, which we today know does not at all behave as required. In the second case (right) the waste is stored under adequate safety but with a remained control and accessibility. It can be repaired, utilized and moved in accordance with future technological improvements and environmental changes. If transmutated in the future, only 1/10 of the volume will remain as toxic waste and this would fit in 2 super-deep boreholes if needed.

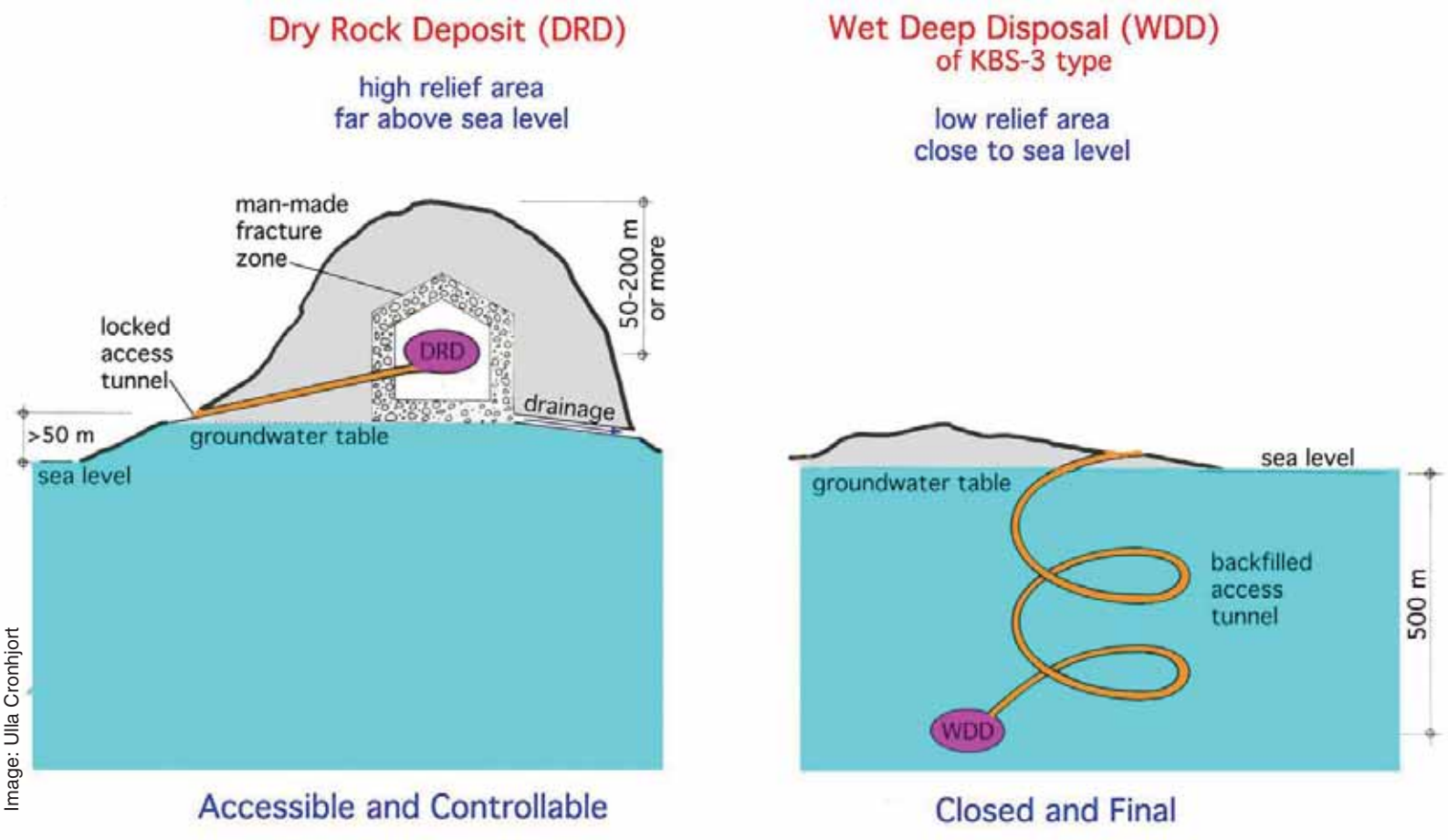

Image: Ulla Cronhjort

Euratom and Lisbon Treaties

The biggest concentration of nuclear power plants

Europe has the biggest concentration of nuclear power plants in the world.

15 EU-countries have nuclear power plants (142) (+ Switzerland 5, Russia 31) (the whole world 439). All 27 EU member states have signed the Euratom Treaty. Article 1 of the Treaty states:

"It shall be the task of the (EURATOM) Community to contribute to the raising of the standards of living in the Member States and to the development of relations with the other countries by creating conditions necessary for the speedy establishment and growth of nuclear industries."

The aim is clear – more nuclear power!

In Finland foreign companies (Areva Resources, Namura/Cooper Minerals, Mawson Resources, Belvedere Resources) are eager to start uranium mining. Mauri Pekkarinen, minister of employment and economy, is of the opinion that if Finland produces nuclear energy uranium mining should also be allowed. The present mining law that has been under revaluation for years, is very mining friendly.

Mining is also included in the Euratom Treaty. Article 52 states:

"1. The supply of ores, source materials and special fissile materials shall be ensured, in accordance with the provisions of this Chapter, by means of a common supply policy on the principle of equal access to sources of supply."

"2.b. For this purpose and under the conditions laid down in this Chapter: an Agency is hereby established; it shall have a right of option on ores, source materials and special fissile materials produced in the territories of Member States and an exclusive right to conclude contracts relating to the supply of ores, source materials and special fissile materials coming from inside the Community or from outside."

(The statues for the Euratom Supply Agency were adopted 12th of February 2008.)

Prospecting

Article 70 states:

"Within the limits set by the budget of the Community, the Commission may, on such conditions as it shall determine, give financial support to prospecting programmes in the territories of Member States. The Commission may make recommendations to the Member States with a view to the development of prospecting for and exploitation of mineral deposits. The Member States shall submit annually to the Commission a report on the development of prospecting and production, on probable reserves and on investment in mining which has been made or is planned in their territories. The reports shall be submitted to the Council, together with an opinion from the Commission which shall state in particular what action has been taken by Member States on recommendations made to them under the preceding paragraph. If, when the matter has been submitted to it by the Commission, the Council finds by a qualified majority that, although the prospects for extraction appear economically justified on a long term basis, prospecting activities and the expansion of mining operations continue to be markedly inadequate, the Member State concerned shall, for as long as it has failed to remedy this situation, be deemed to have waived, both for itself and for its nationals, the right of equal access to other sources of supply within the Community."

So simplifying the message: If a country has got uranium resources and does not agree to mining it has no right to get uranium from the supply within the EU.

Ulla Klötzer
Finland

Energy and the decisionmaking process in EU

Unfortunately most people do not know that the Memberstates of EU lose their jurisdiction in matters of Energy if the Lisbon-treaty is ratified.

They will also be forced to follow the Euroatom Treaty on giving priority to Nuclear Power.

Check the following:

"The Lisbontreaty on the European Union. First part. The Principle Functions. Legitimacy of Decisionmaking.

Article 2

2. As the Treaty allocates decisionmaking to the Union that is to be shared with the Memberstates in a specified area, the Union and the Memberstates may legislate and accept legal binding acts in this matter. The Memberstates are entitled to their allocated right of decisionmaking only if the Union does not use it. The Memberstates may again use their allocated right of decisionmaking in the case that the Union has decided not to use their right, in a specified area, any longer."

"Article 4

2. The Union and the Memberstates shall have "shared decisionmaking" in the following areas: (a-k)... i) Energy"

In the European Parliament, as well as in the Assembly of Ministers, majority decisions are made. This means that 376 votes are needed to gain an ordinary majority. The six biggest countries have together 421 votes, the remaining 21 have together 330.

We all know that big countries like France, G B, Italy and Poland are in favour of Nuclear Power. In Germany the question of phasing out Nuclear Power is getting hot.

Sweden and small countries will have no say in the matters of building nuclear plants or storing nuclear waste.

Birgitta Möller
Helsingborg

EURATOM's task – a speedy establishment and growth of nuclear industries

It is highly important to highlight the commitment made in the Lisbon Treaty to European Atomic Energy Commission, also known as EURATOM, founded in 1957 by Coal and Steel Union – Belgium, Germany, France, Luxemburg, Switzerland, Italy and Netherlands.

The EURATOM Treaty (recently in Lisbon Treaty renamed to the EAEC Treaty) states the requirement for the Community to create the "conditions necessary for the speedy establishment and growth of nuclear industries" contradicts the requirement for equal treatment of electricity generators. Furthermore, it creates advantages for the nuclear industry such as EURATOM Loans and a specific nuclear R&D programs.

The EURATOM Treaty is one of the founding Treaties of the current EU and is an anomaly as it has not been reformed and remains as a stand alone treaty established to support a particular technology - in this case nuclear power. The nuclear technology used to generate energy for civilian purposes may be considerably interconnected with the military sector.

Support for EURATOM is written into the Lisbon Treaty.

Protocol 2 of the Lisbon Treaty dealing with the European Atomic Energy Commission states that EURATOM '*should continue to have full effect*'.

One of the primary goals of EURATOM is the promotion of nuclear energy. Swedish people reject nuclear energy. The Lisbon Treaty like its predecessors mandates the EU to promote nuclear energy. At present Sweden contributes many million EUROs of Swedish taxpayers money into EURATOM every year. The Swedish government could have secured an opt-out from this commitment, but did not seek to do so.

The EURATOM is officially superior the European Union

...and they fall under different treaties. Article 3 of the new for Lisbon Treaty revised version of EURATOM Treaty states following:

"The tasks entrusted to the (EURATOM) Community shall be carried out by the following institutions: a European Parliament, a Council, a Commision, A Court of Justice, a Court of Auditors. Each institution shall act within the limits of the power conferred upon it by this (EURATOM) Treaty."

In other words all these institutions of European Union have the task to promote, support and favour nuclear power above other energy types.

Shielded from scrutiny

The EURATOM Treaty is largely shielded from the scrutiny of the European Parliament and there is no co-decision for its operational functions. At minimum the modification of the decision mechanisms prescribed in EURATOM Treaty would be required confirming the legislative role of the European Parliament. Without any reform of the EURATOM Treaty it has been included to the Treaty as an annex.

Citizens in Member States do not want the continuation of the special treatment afforded to nuclear power through the EURATOM Treaty. This was made clear in the Eurobarometer poll, in which only 10% of the EU population wanted additional research for nuclear fission. Furthermore, over 120 Non-Government Organisations have signed a petition to the Convention calling for the radical reform of EURATOM.

EURATOM profits

It is when You study the budget of EURATOM for 2006 that You realise that the profits flow out to the European Coal and Steel Union, that is now being dismantled. But as Article 10 of the EURATOM new revised version states:

"The revenue and expenditure of the European Atomic Energy Community, except for those of the Supply Agency and Joint Undertakings, shall be shown in the budget of the (European) Union."

So it could be extremely useful to check out the Supply Agency and Joint Undertakings incomes for a true picture to emerge. (http://eur- lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2007:274:0001:01:SV:HTML)

It is necessary for as many Member States as possible to leave the EURATOM Treaty in accordance with the relevant international rules. It is no longer a question whether the Lisbon Treaty is in Sweden's interests or whether we should send the government back to negotiate a better deal. We believe Sweden and Europe deserves a lot better.

Anneli Lundin
Sweden

Collin Street, Dublin, June 11, 2008

Finland – the new OL 3 reactor for a nuclear renaissance?

Image: Teollisuuden Voima Oy

A vision of the Olkiluoto 3 reactor (montaged nearest to the sea).

The construction of Finlands fifth reactor, Olkiluoto OL 3 (owned by TVO), started in 2005. It is going to be the biggest prototype of a prototype reactor in the world. 1.600 MW.

The reactor was bought at a turn-key price of 3,2 billion euros from the French/German company Areva that desperately needed to get a deal for a new reactor in order to be able to start promoting the nuclear renaissance.

When the project was discussed and voted upon in the Finnish Parliament the reactor was promoted as a cheap solution to tackle climate change. The price mentioned was 2.3 billion euros. As stated above it was bought for 3,2 billion euros. According to French sources the delay will cost Areva 2,2 billion euros.

Although the price was a turn-key price the Finnish company TVO and Areva are now argueing about the costs. The reactor was supposed to start producing nuclear energy in 2009. At this moment production is estimated to start in 2011.

"A nice bill"

Due to the delay also the consumers will get a nice bill. According to Elfin, owned by 24 big Finnish companies and promoting their interest to get cheap electricity, the delay will cost the electricity consumers in the Nordic countries 3 billion euros since there will be no "cheap" nuclear electricity on the market starting from 2009 as originally planned.

On top of that energy companies must buy emission rights for at least 500 million euros. This bill will also be transferred to the consumers.

OL 3 has been hit by a lot of safety problems. A report by the Finnish Radiation and Nuclear Safety Authority (STUK) published in July 2006 clearly shows all problems involved in building new reactors. The report stated for instance that the number of subcontractors is large (more than 2.000 from 28 different countries, 40 % from Finland). Some of them have no previous experience in constructing nuclear power plants. The decisive factor in selecting subcontractors in the final phase was generally the total price tag of the offer, if the bidder met the specified criteria. The report drew attention to the fact that the vendor has selected subcontractors with no prior experience in nuclear power plant construction and that they had not received sufficient guidance and supervision to ensure smooth progress of their work. It also stated that the management of the organisations participating in the construction do not fully comply with STUK's expectations concerning good safety culture. Furthermore time and resources needed for the detailed design of the unit were clearly underestimated when the overall schedule was agreed upon.

Concrete composition

Already at an early stage the process of designing the concrete composition, concrete manufacturing and quality control measures involved problems. The approved concrete composition was altered during concrete mixing. Deviations in the concrete composition and in concrete pouring were not addressed openly and without delay. There were problems with the manufacturing of the reactor containment steel liner. The function of the steel liner is to ensure the leak-tightness of the containment i.e. to prevent any leaks of radioactive substances into the environment even in case of reactor damage.

Breaches in welding work

At the beginning of August a fire took place at the OL 3 construction site. The first news stressed it was a fire of minor importance. A couple of days later it turned out to have caused substantial damage in the wall constructions. The repair works were estimated to take several months.

Mid August a current affaires television program of the Finnish Broadcasting Company (YLE) drew attention to serious security breaches in welding work at the OL 3 site. Two reports concerning these accusations where made by STUK and handed over to the Ministry of Employment and the Economy. Both reports – as expected – attached attention to some minor problems but the overall message was "everything is ok".

Mid August Associated Press (AP) reported that "Several employees, including some in managerial positions, have reportedly left because of irregularities during the early construction phase."

At the end of August the Finnish Construction Trade Union issued a strike warning for the OL 3 building site. It says that there are irregularities concerning Polish construction workers. The French company Bouygues has refused to explain how builders' taxes and social security payments are being handled.

Ulla Klötzer
Women Against Nuclear Power – Finland
Women for Peace – Finland

Geothermal energy rather than nuclear

The growing new global economy has left us with the task to safely dispose the deadly radioactive waste products resulting from an unacceptable commitment to nuclear energy.

To solve any problem you first have to define the cause of it. The present increasing need for energy is caused by the global economy system that requires Profits to raise from one day to the next in a never ending deadly spiral. The economical system must be totally changed in order to avoid an irreversible consumption of natural resources. Nobel Laureates such as Milton Friedman must be reevaluated in the light of the destructive consequences of their economical theories.

Future production requirements

Future energy resources must be environmentally compatible. Ideally they should be renewable or, at least, be long-lasting without affecting ecological systems. Sun- and Wind power fulfill these criteria. Hydropower, even relatively compatible with nature, are causing negative effects on aquatic life and cause flooding of big areas. In this context it is worth to mention the ecological disasters caused by cutting trees. The exploration of tropical forests are well known but as the water regulation of the forests are disrupted, nature strikes back with devastating flooding due to the absence of the water-holding capacities of tree roots.

Enormous quantity of waste

Most people fear reactor incidents as the main risk with nuclear energy production. But just consider that during the Chernobyl catastrophe only 2-3 % of the contents from one single reactor leached out. Then consider how many reactors are around the world and multiply by the years they are in action. Then realize this enormous quantity of highly radioactive waste that has to be protected from all living creatures at least for one million years.

10 – 100 times more intense

Some say transmutation will decrease the storage time 10 – 100 times therefore slightly reducing the problem, however one must also realize that the total radioactivity is not affected by transmutation. As a result the radiation of waste from transmutation will consequently be 10 – 100 times more intense with increasing risks in handling the process.

Colloids in the sealing clay

The Swedish Nuclear industry claims to possess a storage method providing no leakage from copper canisters 500 meters down in deep rock. Nevertheless among many others there is a serious fault with the sealing clay which is well known by all physical chemists for it's great ability to produce particles less than 1 micrometer, i. e. colloids. These colloids, which move freely in the water, will mobilize the radioactive nuclides on the colloid enormously large total surfaces by adsorbing nuclides and providing them with high mobility – ideal transport for fast leakage into the ground waters.

The solid rock myth

Even admitting existing ground water flow, the Swedish nuclear waste industry suggests to consider the solid rock, as a strong barrier protecting from leakage. But the way out is the way of lowest resistance and in this case it will be avoiding the tortuous path searching for the cracks in the rock instead choosing the simplest way - the drill holed transport tunnels , filled with only clay and rabble. It is also unlikely that the moulded ceilings between the lid of the canisters and the open canisters will provide enough crystalline order to guarantee necessary resistance towards corrosion. The situation becomes even an ethical issue since Sweden is already exporting it's method despite its serious deficiencies supported by the strong powers in EU and Sweden who will probably agree to accept atomic wastes from other countries.

Geothermal Energy

Nuclear Power must always be the last type of energy technology choice. Every Nuclear Reactor is a deadly mistake made by people who clearly lack elementary knowledge.

A surprisingly overlooked unlimited alternative energy source that is cheaper than any other type of energy production and superior regarding impact on environment. It will never cause a war! It is Geothermal Energy that may turn out to be the solution.

Henrik Nilson
Sweden

New theory:

How Uranium Weapons cause cancer

There have been important developments in the assessment of health risks from uranium, and from uranium weapons: I hesitate to write Depleted Uranium weapons as there is some evidence that natural uranium had been used by the US forces since 2002.

The reason is obvious. First, DU can now be routinely (though expensively) traced using isotope measurements with the new technologically advanced sector field and multicollector mass spectrometers, and second, uranium is increasingly being shown to be extremely dangerous, causing a whole range of illnesses from terrifying birth malformations through cancer to the bewildering array that makes up Gulf War syndrome.

Theoretical and experimental

The military and the governments (UK and USA) that have employed uranium weapons since 1991 have argued consistently that the 'radiation doses' from exposures to the dust produced when the penetrators strike their target are too small for any effect.

The sub micron particles are long lived and volatile. Their mean diameter is 100nm and they act as a gas, and can even pass through skin; they float away from the battlefields and blow around the world. They are inhaled. However, when assessed in terms of their average radiation dose to the whole body (Joules per Kilogram, or Grays) the doses from inhalation are far too low for radiobiological models to predict any radiation effect. So when such effects are found through epidemiology or (just by massive and clear observation in hospitals in Iraq) they are discounted. This is the same deductive logic that is applied to the nuclear site child leukaemia clusters like the one at Sellafield. But although such naïve and stupid analyses have been parroted by such august bodies as the Royal Society, science, in the form of empirical results from the lab, has been confirming that uranium seems to have massive genetic effects out of all proportion to its intrinsic radioactivity.

Genotoxic damage

Much of the experimental work has been done by Alexandra Miller in the USA. Miller and her team have reported several results that show that uranium causes unexplained and high levels of genotoxic damage both in animals and in cell cultures. However, there's no explanation as to how this can be: uranium seems to show effects of radioactivity where there is no radioactivity. In Gulf War soldiers there was found to be chromosome aberration levels consistent with radiation exposures of about 150mSv, 100- times background, unexplainable of the basis of the amounts of uranium they could have had been exposed to. A possible explanation for these anomalies was advanced by Chris Busby in 2003. Uranium, he said, is unique in that it binds strongly to DNA, but also has the highest atomic number Z of any natural element. The absorption of gamma radiation is proportional to the fourth power of the atomic number (which is why lead, Z=82) stops X-rays and gamma rays. The uranium in the body, bound chemically to the DNA, focuses the gamma radiation from natural background into the DNA: indeed it is the dominant exposure. Uranium absorbs hundreds of thousands of times the background gamma radiation than does normal tissue which is mainly composed of low atomic number elements like hydrogen (Z=1) and Oxygen (Z= 6).

Uranium contamination increases absorption of natural background radiation

The absorbed energy is re-emitted into the DNA as photoelectrons, and these cause the genetic damage. This suggestion for a plausible mechanism to explain the lab findings and the epidemiology was made to the chair of the Royal Society Uranium Committee in 2004 (Prof Brian Spratt). Nothing was done. By 2006, a paper had appeared in the USA where gold particles (Z=79) were reported to enhance X-ray therapy for cancer. Busby published two articles on the issue in 2006 and in 2007 sent a paper to the Journal of the Royal Society. Despite three referees recommending acceptance of the paper for publication, the editor rejected it. The paper was finally given at an international conference in Germany in 2008 and has recently been reported in New Scientist.

Uranium is the source material for weapons, but also for nuclear energy. It is mined and refined and the miners suffer illnesses. If it is accepted that uranium contamination causes an increase in the absorption of natural background radiation (and research is currently being carried out at the University of Ulster on this) then this could be the nail in the coffin of both uranium weapons and also the nuclear energy future. It could also explain a great deal of the observations of increases in ill health in those exposed to the element. The increasing use of large amounts (tons) of uranium in bunker busting bombs and cruise missiles has resulted in the contamination not only the battlefields of Iraq and Afghanistan, but also the entire planet. The health consequences are likely to be serious.

Prof. Dr C. Busby
Faculty of Life and Health
University of Ulster

Read the entire article at: www.pharmacychoice.com/News/article.cfm?Article_ID=93531

Profitable Gender Economy as the powerful tool on our way out of the nuclear trap

We are sharing the world and the times where many things are not what they are told by officials to be. So it is even with the way to equality that goes through acknowledgment of powers and areas of oppression specific for both women and men – both Patriarchal and Matriarchal.

Men are nowadays announced by EU scientific policy to be the only oppressors by gender, in reality being the most violently oppressed. Where in the so called modern gender science do fit the Chernobyl-disaster clean-up sacrificed about 1 000 000 men? From the 26 April 1986 and in the following months, one million men were sent to cover up the reactor of Chernobyl nuclear power station limiting the consequences of catastrophe. If the nucleus hadn't been under control by the 8th May, there would have been an atomic explosion making Europe impossible to live in. The goal was achieved May 6th but who remembers the sacrifice of those men? (Milkas Sunday film seminar covers this subject.)

The feministic projects are not about and for men. Both male and female areas of power have to be revealed and analysed be-

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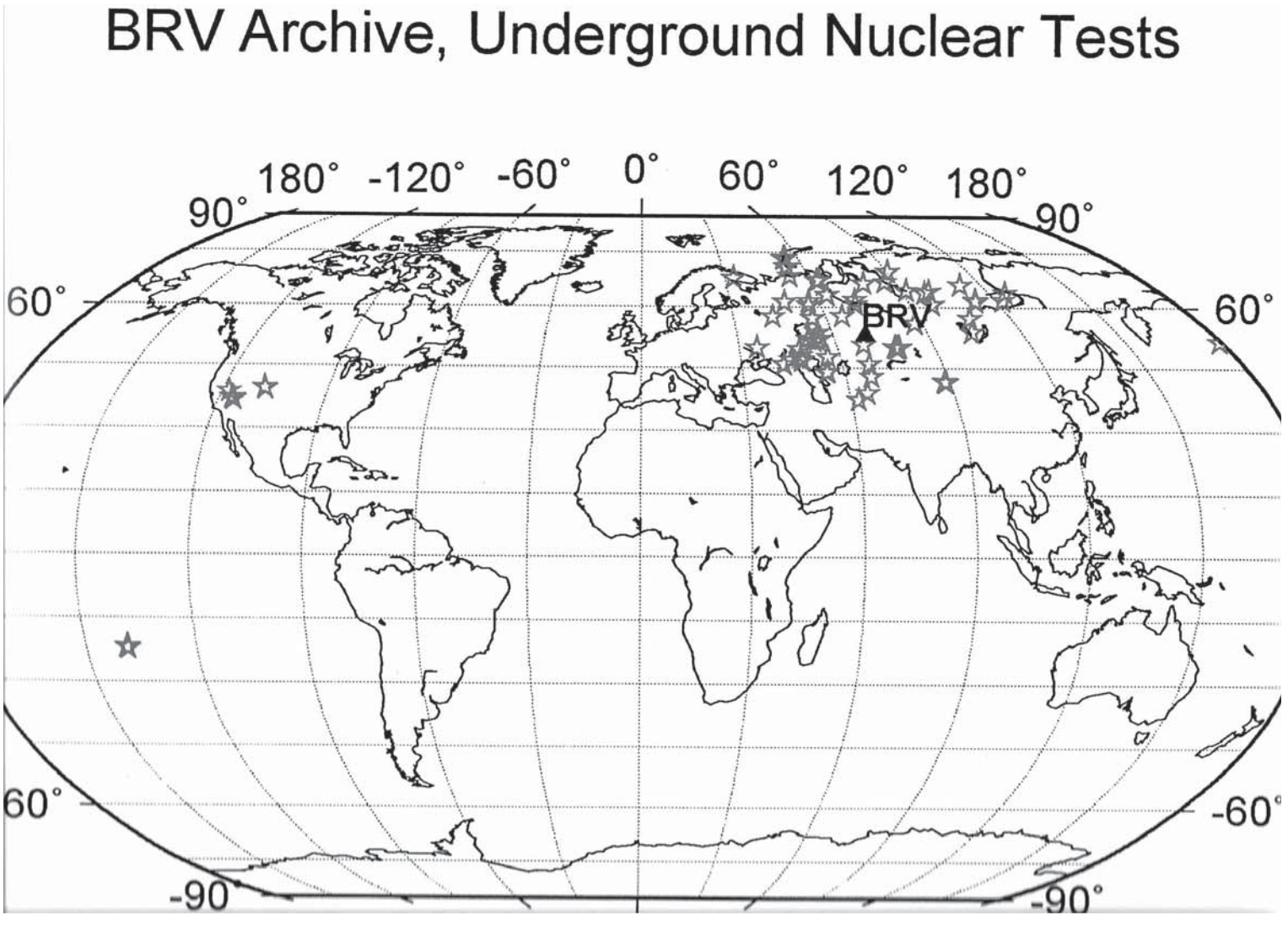

Fig. 2. The Borovoye archive for world-wide underground nuclear tests (stars) during 1969-1999. (Won-Young Kim and Paul G.Richards, Columbia University, US, and Vitaly Adushkin and Vladimir Ovtchinnikov, Inst of Geopshere, Moscow, Russia. April 2001) http://www.ldeo.columbia.edu/Monitoring/Data/Brv_arch_ex/brv_text_table.pdf

Continued from previous page

fore we can start to see the whole arsenal of strategies we have to use to build a gender-equal and whole-gendered society – the only way to reach peace, demilitarisation and therefore even investments in the alternative energy sources to the currently by EURATOM Treaty favourised nuclear.

Many problems of modern life can be attributed to a lack of control over our gender roles and lack of trust that other people, organisations, states would posses competence in the harmonisation of gender powers, traits, sexed division of labour etc. The costs, great mistakes in life – war, capital punishment, hatred of other gender-cultured peoples, not to speak of neurosis, suicide, crime, drunkenness – spring partially from a lack of gender balance. Thinking of the nuclear war possibilities, whole humankind could well be depending on the co-operative efforts to balance gender identities and activities of humanity. A development of the individual, organisation or society can only be counted worthy if it do not destroy but create values for eternity, for the higher development of the whole of humanity.

Gender as the most important resource

Gender Economy is a meta-science built on the base of the biological duality of the human species. Gender Economy acknowledges gender as the most important resource to manage and balance rewarding the masters of it with substantial flow of unlimited satisfactions. It suggests that the basic satisfactions and needs in life should not be dependent on the material and monetary access – which requires a global economical model shift. The best things in life are for free! Gender Economy is about maximisation of satisfactions that could be seen as mostly dependent on the skilful management of the whole spectrum of gender dualities: 1) masculinity-femininity, 2) gender ideologies of feminism-masculism and 3) the matriarchal-patriarchal power areas.

Sexual is the dominant discourse of reproduction and love – therefore the base of human power. Gender Economy suggests to view the whole structure of gender inequality as a globe with two poles. The patriarchy pole generates gender structures that centrifuge men into the traditional patriarchal areas of sex domination where access for women is limited. The opposite matriarchal pole generates gender structures that centrifuge women into the traditional matriarchal areas of sex domination where access for men is limited. Both patriarchal and matriarchal areas include advantages and disadvantages.

As there is a gender economy involved in everything we do as all aspects of human interaction are gendered, the tradition of public-private domain divide could be holding in the satisfactions members of our societies could achieve and causing enormous costs. Usefulness of economic analyses and quantitative methods is limited if we try to estimate the costs of gender-violence. I suggest though engagement in irrational gender use results in costs and rational gender use stimulates satisfactions.

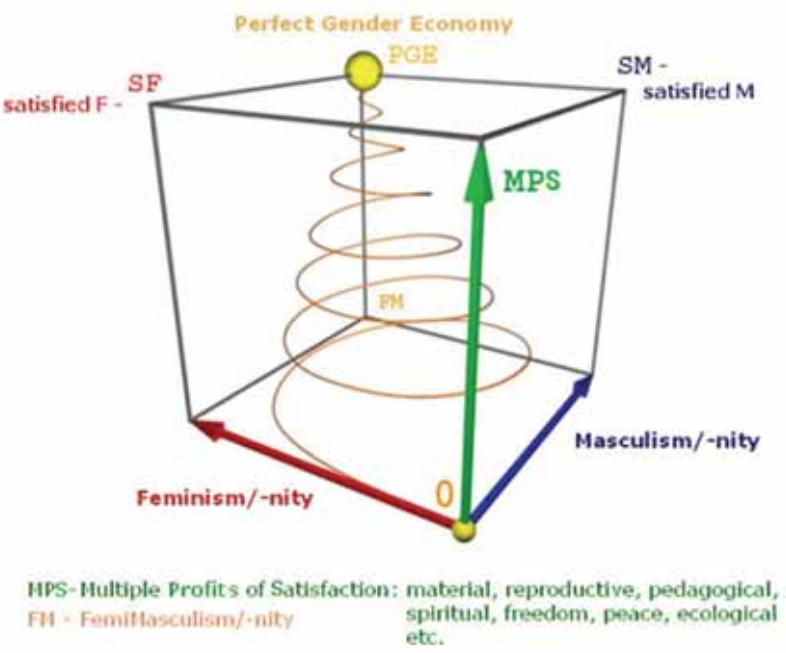

Fig.1. The 3 axes of Gender Economy. The more experience of the duality, the higher levels of satisfactions are reached. The spiral depicts the process leading to Perfect GE (gendereconomy.com).

The symptom of the war between sexes

The military war is the symptom of the war between genders. This all too often ends in wars between nations, classes, rases and other groups. Gender roles are often used even as male and female weapons. In the case the bearers of these tools are not harmoniously aware of the definite and balanced place each gender role plays for the whole and each other, if the understanding of the gender contract and anyones place in the gender traits and activities of the whole is corrupt, wars occur.

The psychological matriarchal gender based violence has been out of the scope of attention of academic analyses for far too long. Much violence is gender-based, both because it is perpetrated in the name of gender and the gender order, and because its targets are selected because of their gender. Gender-based violence is most visible as the traditionally noticeable men´s physical violence towards women and children, or other men. Men are primarily the ones who use physically damaging violence and men are also most often implicated in other types of violence as well – both as victims and as perpetrators. The fact that men are the perpetrators of most physical gender-based violence does not mean that the violence is caused by male biology or some predetermined personality constellation. The causes of gender-based violence are believed to be social. There are cultures in which males are far less violent and some in which females are far more violent. If violence appears we must search for the social origins of such violence. Men who feel powerless, marginalized and excluded, must constantly confront survival issues before they can take responsibility for violence. He who makes a beast of himself gets rid of the pain of being a man.

The way out of the nuclear cartel power dominance granted by the EURATOM Treaty

The partial scientific knowledge structure and the nuclear cartel power dominance granted to the founding majesties and excellencies of the EURATOM Treaty has led us to devastating results with a for all times nuclear contaminated continent depicted in picture 2. Absolute power corrupts absolutely as the map brings the evidence of five nuclear superpowers contaminating territories through nuclear underground tests. One could call these results beyond criminal – but even in our current Rule of Law they are not, and our prison based punishment system has not granted us the solution. We need a system that encourages people to be radically honest and rewords them for bringing access to truth, even if it is very dark. People who do these outrageous deeds are not evil by nature – they are blind and desperate – locked within their cells of limited comprehension of possibilities hunting short term, low level satisfactions and tangled approval of their loved ones. Everybody realises that the power in their hands is not reasonable but many of them were born in to that power and they do not see any reliable alternatives either. Even the majesties and excellencies are trapped within their limited realities – forced by their gender to be destructive. We have to create new legislation granting forgiveness for all realised and sincerely regret crimes, even the biggest of them, such as depicted in the picture 2. The only way out of this is through understanding and love which could be reached through dual structures of Gender Economy.

Feminism is blind to the inequalities done to males

Claiming the ideals of gender equality, feminism is blind for the inequalities done to males, not ever looking for the areas where males could be oppressed by females. The oppressive female power is invisible in feminism. The ideology of feminism is structured in a way that it even does not allow to suggest to analyse female power. We have to study gender with the help of analytical tools of feminism even daring to brush against it´s blinds. Modern feminism directs towards matriarchy, struggling to achieve higher satisfactions and welfare for women. It fails to do so as it has forgot to analyse and teach the female responsibility to manage the matriarchal areas of power humbly and generously, creating love and understanding. Both men and women would prefer to be acknowledged with the strengths and weaknesses of both gender roles as the complete whole-gendered picture of powers and traps for bearers of both genders would appear. The pain of both sexes has to be acknowledged for the healing processes to start. Only then will women and men have a full chance to re-examine their act for the achievement of gender satisfactions and elimination of gender wars.

Masculism as the other dual twin notion

The equality goal of feminism can not be reached without a full-hearted commitment of the male half of the population. Feminist approach dominates totally the contemporary studies of masculinities which is not enough as a discourse. Masculism is the other dual twin notion and to feminism reversed discourse that completes gender science. Masculist subjects can be: child custody strongly favoring mothers; some men being incarcerated for the inability to pay unrealistic child support payments; children aborted without informing the father; children given up for adoption without fathers' consent; men risking their lives in conscripted military service (women are conscripted to military service in Israel); high-risk employment, but receiving no special honor for doing so; men charged in some domestic violence cases, even when victims; men charged in some rape and sexual harassment cases with no evidence beyond the plaintiff's claim.

Now is the time to acknowledge the power of women in the private domain and public sector where the gender segregated reproduction of humans is executed. That is where the men are raised to protect women, trained to be sacrificed if the need will come – as it did when Chernobyl happened. The greatest inhuman gender violence against men is that the little boys from day one through attitudes and games are raised to become soldiers, trained to kill and to be killed if the war or a catastrophe would occur. That is a gender role boys do not share with the girls. It is a highly emotionally handicapping gender. If a person has been moulded into a violent role since birth he/she may not recognise other satisfying gender alternatives available – emotional, pedagogical, spiritual, ecological, pacifist...

Global multiple system shift dethroning military cartels

World Court Project UK warns us that the military agendas are indoctrinated into EU universities. So it has been for decades even with domains of gender science. Until on EU policies nowadays dependent universities avoid to acknowledge the dual gender powers and oppressions we should not be surprised at the success that military industries are having in oppressing the whole process of struggle for gender equality. The monopolies held by military cartels are a severe reason to the contamination of our planet with the nuclear and other polluters. Military industry is even involved in the design of the education in the universities and welcomes the desperation that evolves from the immature gender identities. It traps us into processes and organisations that deal with situation in a loveless way that is often desperate and unsuitable for the well being of our species on our still wonderful planet Earth. It is time to reclaim our universities and offer the people rational Gender Economy science. This depends though on a global and multiple (energy, economy, legislation etc) system shift that has to be designed and managed by all the nations of our planet together – transparently and peacefully.

Ditta Rietuma
Gender economist, ME
Gendereconomy.com

Gender Economy

The European Social Forum

– in Malmö, Sweden, 17-21st of September www.esf2008.org/program

The European Social Forum is a great world event, part of a worldwide movement of Social Forums. 20.000 people are expected – 300 cultural events, + 200 seminars/workshops of many colours.

ANTI-NUCLEAR EVENTS:

18th of September, Thursday 9:30-12:30
Folkets hus Nobeltorget, Sal 3
European Spallation Source (ESS) in Lund, Sweden, for a Future European Nuclear Waste Cemetery?

The location of ESS will be announced in December - with alternatives in Spain and Hungary. Environmental organisations in Sweden are critical to ESS plans - a research project with an added reprocessing plant may eventually become the world's most modern "Sellafield" on the coast of an inland Baltic Sea. National vs. European law on nuclear waste management. Swedish environmentalists vs. ESSS.se
Swedish Environmental Movement's Nuclear Waste Secretariat
Swedish Anti-Nuclear Movement
Friends of the Earth, Helsingborg
Swedish Nature Conservation Society, Lund.

Thursday 14:00-17:00
Ungdomens hus, Sal 4
Nuclear weapons
0European Peace Action, Kvinnor för fred, OFOG Sweden, Transnational Institute

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Thursday 18:00-21:00
Chokladfabriken, Cacaosalen
Equality, renewable energy and nuclear power
Renewable energy sources. Nuclear power falsly presented as a solution to climate problems. The patriarchal structure and its influence on choice of energy. Energybalance, solarenergy? Make your own energy for your household!
Friends of the Earth, Sweden and Technology for life

Thursday 18:00-21.00
Folkets hus Nobeltorget, Sal 1
The growing influence of NATO and the militarisation of EU
Since the cold war NATO has been expanding into new roles. The EU is creating a military role for itself. Both are willing to act unilaterally. Workshops: New NATO Countries; Military Aspects of the Lisbon Treaty; NATO & EU.
European Peace Action, Kvinnor för fred, OFOG Sweden, Transnational Institute

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19th September, Friday 9:30-12:30
Hyllie park folkhögskola
Towards a nuclear-weapons free Europe & world
Influence political leaders to move towards a nuclear weapons free Europe and to abolish all nuclear weapons worldwide. World Court Project (WCP) prepares a return to the International Court of Justice (ICJ). The Nuclear Weapon Convention (NWC) could be a way-out of the current deadlock.
Swedish scientists and engineers against nuclear arms. INES, WCP, UK

Friday 9:30-12:30
Ungdomens hus, Festsalen
Against foreign military bases
There are over 200 US military facilities within the EU, and the EU member states among them maintain a formidable global network of military installations themselves. These facilities are used to launche wars and interventions across the globe, and are maintained outside democratic control. This session will include testimonies from local campaigns all over Europe.
European Peace Action, Greek social forum, No to war Denmark, Transnational Institute

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Friday 18:00-21:00
Rosengård - Rosengårdsskolan
Nuclear energy and chemical plants
– consequences on the environment
Anti-nuclear demonstrations in our countries and share experiences. How the nuclear energy causes new wars and occupations in the middle east.

Friday 18:00-21
Folkets hus Rosengård, Festsalen
War on humanity
- Nuclear accidents and use of depleted uranium

Use of uranium ammunition, low dose radiation, and their effects on humans and environment.
1. Consequences of nuclear accidents and radiation fall-out on children and
future generations, Chernobyl example.
2. Effects of nuclear waste material- depleted uranium (DU) on soldiers and the local population.

Internationella kvinnoförbundet för fred och frihet IKFF, Kvinnor för fred, ARK
Dr Chris Busby, Dr Eva Fidjestol

20th September, Saturday 9:30-12:30
Chokladfabriken, Cacaosalen
Working for a nuclearfree and peaceful Europe with Perspectives from Women and the Global South

Create a culture of peace in Europe, alternative security policies, nuclear disarmament, cooperation with the South, peaceful means within the framework of the UN and OSCE. Rae Street, Berit Ås, Agneta Norberg, Ulla Klötzer, also WILPF, Mment de la Paix, operation 1325.
Campaign for nuclear disarmament, IKFF, Operation 1325, Svenska Kvinnors Vänsterförbund

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Saturday 9:30-12:30
Ungdomens hus, Sal 4
Resistance against NATO
and alternative peace strategies in Europe

The NATO Enlargement into the post-soviet area, NATO use northern Sweden as their training grounds. NATO efforts in Sweden, Georgia and Germany and the resistance against them. Struggle against the militarization in Europe and for a European peace strategy. The dissolution of NATO.
Kvinnor för fred

21st September, Sunday 9:30-12:30
Enskifteshagen, Tält 1
No to Nato, no to US bases and nuclear weapons in Europe:
A Europe for peace and solidarity
The 60th anniversary of NATO (May 2009 Strasbourg-Kiel); No to the war in Afghanistan; No to the missiles defense. A new vision of the collective security in Europe.
Campaign for nuclear disarmament, Solid

-21th September, Sunday
Enskifteshagen, Tält 2
Security in Europe - Security for whom? Ban the bomb!
EU has to recognize the link between patriarchy and war. Reshaping and re-conceptualizing the European security and defense politics with feminist analysis.
The nuclear bomb is the biggest threat to our world!
Kvinnor för fred

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EUROPEAN CULTURE FESTIVAL
- A PART OF EUROPEAN SOCIAL FORUM 2008
www.panora.nu/main/bilder/ecf_eng_low.pdf

Page 61 – **MILKAS event**: 2 FILMS DISCUSSION
Sunday Sept. 21st - 13.00 at GLASSFABRIKEN

Health Eeffects of the April 1986
Chernobyl Nuclear Reactor Accident

The Sacrifice
Documentary. English subtitles.
From the 26 April 1986 and in the following months, one million people were sent to cover up the reactor of Chernobyl nuclear power station and try to limit the consequences of catastrophe.

Nuclear Controversies
International conference in 2003 in Kiev, The Ukraine of the World Health Organisation and the Association of Physicians of Chernobyl. It captures a conspiracy to alter conference decisions the IAEA didn't like.

Saturday: big parade/demonstration, leaving from Rosengård in the afternoon and ending up in Pildammsparken to finish off the day with a big party.

Sunday: closing event from 1.30pm to 4pm.

The Swedish Environmental Movement's Nuclear Waste Secretariat
Miljörörelsens kärnavfallssekretariat, Milkas
Tegelviksgatan 40, 116 41 Stockholm, Sweden.
Tel. +46-(0)8-559 22 382. Fax: +46-(0)8-84 51 81
info@milkas.se **www.milkas.se** **www.nuwinfo.se**

The Swedish Environmental Movement's Nuclear Waste Secretariat (Miljörörelsens kärnavfallssekretariat, Milkas) is a non-profit, non-governmental organisation founded 31 October 2004 by the national anti-nuclear group The Swedish Anti-nuclear Movement (Folkkampanjen mot kärnkraft-kärnvapen, FMKK) and Friends of the Earth, Sweden (Miljöförbundet Jordens Vänner, MJV), the Swedish branch of Friends of the Earth International.

The Milkas statutes state:
The purpose of the association is to follow and critically scrutinize all projects dealing with management of highly radioactive waste, and to work for the best long-term and environmentally sound management method.

Milkas:
- **monitors issues dealing with long-lived radioactive waste nationally and internationally,**
- **supports the work of national, regional and local environmental organisations on the nuclear waste issue,**
- **contributes towards making information related to the nuclear waste management public participation process more comprehensive,**
- **takes part in the public participation process within the framework of the environmental impact assessment review process according to the Swedish Environmental Code, European Union Directives, and the Espoo Convention, and takes part in cases in the Environmental Court.**

The association is partly financed by a government grant from The Swedish Nuclear Waste Fund.