

Peace & Progress

Briefing

Can we learn lessons about nuclear power from Chernobyl and Fukushima?

In April we commemorated the 25th anniversary of the nuclear explosion at Chernobyl. Mikhail Gorbachev, then President of the Soviet Union, is the Founding President of Green Cross International and heads the international Climate Change Task Force. On 27 April of this year, before the subsequent disaster in Japan, he wrote:

“We must continue to seriously examine the long-term public health and environmental consequences of the accident to better understand the relationship between radiation, both low and high-level, and human life...The material damage inflicted by Chernobyl, although enormous, pales in significance when compared to the ongoing human costs. The true scope of the tragedy still remains beyond comprehension and is a shocking reminder of the reality of the nuclear threat. It is also a striking example of modern technological risk.”

He recognises that many countries today are hugely dependent on nuclear power and continues, *“But it is necessary to realise that nuclear power is not a panacea, as some observers allege, for energy efficiency or climate change. Its cost effectiveness is also exaggerated, as its real cost does not account for many hidden expenses. In the US, for example, direct subsidies to nuclear energy amounted to 115 billion dollars between 1947 and 1999, with an additional 145 billion dollars in indirect subsidies. In contrast, subsidies to wind and solar energy combined over the same period totalled only 5.5 billion dollars.”*

In this careful overview of the current development of nuclear power internationally, Mikhail Gorbachev warns of the closed nature and secrecy of the industry and the need for full transparency, public oversight, independent regulation and complete emergency preparedness and response mechanisms.

These are sadly the very lessons that the Japanese authorities say they themselves now need to learn following the terrible events at Fukushima. And they are the lessons that the British authorities are loath to recognise as relevant. The culture in the UK is one where the nuclear inspectorate is bound up with the industry it inspects, indeed employing the same people when inspectors are thin on the ground and where politicians enter the industry as directors or advisers, the “revolving door” spinning apace.

The Guardian newspaper revealed the extent of the collusion between government and industry - and to the most dishonest, immoral and inhuman ends- when it printed on 1 July 2011 the evidence that, two days after the nuclear accident in Fukushima, the British government approached nuclear companies to draw up a coordinated public relations strategy to persuade the public of the safety of nuclear power.

The nuclear accident at Fukushima is still unfolding at the point of writing, with three plants in meltdown and Tokyo Electric Power Company promising to have all six of the plants under control by January 2012. As with Chernobyl, it will be many years,

possibly generations, before we know the full impact of the accident in terms of human health and effect on the environment.

Most of what we know about the effects of radiation exposure comes from the studies of survivors of the Hiroshima and Nagasaki bombings, from intentional medical radiation and from a few high dose accidents. The Hiroshima exposure was a one-time dose largely composed of gamma rays and x-rays, that is external rays, because the bombs were exploded high in the air and produced very little fallout. This type of radiation exposure is very different from the releases caused by the disasters at Chernobyl and Fukushima. These have produced long-lived radionuclides such as Cesium 137, Strontium 90 and Plutonium 239, which remain in the environment for hundreds of years and are internal, being inhalable or ingestible. To say that these cause no harm to human health is to ignore the work carried out by much research, including that of Dr. Chris Busby, Dr. Ian Fairlie and Helen Caldecotte amongst others. Unfortunately, minimising or covering up the potential risks has long been a strategy of the nuclear industry and its government regulators.

Thus it has been in Japan. When the Great East Japan Earthquake struck on 11 March 2011 the No. 1, No. 2 and No.3 reactors at Fukushima all automatically shut down. But the earthquake and the tsunami crippled the emergency generators, leading to a total power failure that prevented the cooling systems from functioning. Tokyo Electric Power Company (TEPCO) concealed data showing spikes in radiation levels at the No. 1 reactor, one day before a hydrogen explosion injured seven workers. An internal report containing minute to minute data on radiation levels at the plant as well as pressure and water levels inside the No. 3 reactor was never released. Radiation levels were well above the upper limit for an entire year under the plants' safety standards for workers. They were not informed. Failure to release radiation data in the early stages of the crisis is said to have delayed the evacuations of communities near the plants.

The language used by TEPCO leads us to believe that the situation for people and the environment will become controlled. The situation is, on the contrary, already out of control and the public are aware of this. The Japanese government's decision allowing Japanese schoolchildren to receive the same levels of radiation previously only allowed to adult workers in the industry is a measure of the lack of control that the authorities have over the situation, alongside their desperate attempts to force people to function as if all were as normal. The result was parents digging up the surface of school playgrounds and dumping it outside government offices. Insult has been added to injury for the people who have been made to abandon their homes, livestock and previous way of life. The disaster, but for a bail-out by the government, has brought TEPCO to bankruptcy, this means that those suffering the consequences of the industry's massive failure are also having to pay for the compensation.

The British government is working to legislate that this will also be the case for companies building new nuclear plants in the UK; there is to be a cap on insurance paid by the companies in the case of accident. There is also to be a cap on the companies' liabilities in respect of the waste new-build will produce. The bill for this is open-ended, as we have as yet no answer to what to do with high burn-up nuclear fuel waste. The government concedes that it will have to stay on site for something in

the region of 120 years and then we don't know what we are doing with it. The waste has to stay on site because it is too hot to dispose of, creating a situation where we are all vulnerable to the effects of natural disaster, attack and political or economic instability on this accumulating toxic pile.

The last Labour government and the present Coalition are so keen that we press ahead with new nuclear power stations that regulation is being put in place to ensure that there is no opposition, in the form of National Policy Statements which were introduced to ease through the introduction of new infrastructure projects, such as nuclear power stations, with altered planning procedure that centralises the process, and Justification legislation.

The "Justification" for nuclear power was issued by the Secretary of State on the basis that it is his decision that the health risks posed by nuclear power are outweighed by the cost benefits. A particularly outrageous part of this assessment was that the Secretary of State need not consider the effects on health of the mining of uranium on workers and the environment, because that process takes place in foreign countries.

The head of the Office for Nuclear Regulation, Dr Weightman, has taken less than three months to release an interim report on Fukushima, the purpose of which is to facilitate the push for new nuclear power in Britain. Events at Fukushima need not hinder the building of new nuclear plants, decrees the report. While the engineering details of the Fukushima tragedy are beginning to be admitted publicly, the biomedical details are still being glossed over.

With the publication of the Weightman provisional report comes the discovery that 5,000 nuclear workers have now shown signs of internal radioactive contamination after simply visiting the Fukushima site. This guarantees that Japanese citizens from nearby areas have also experienced some degree of internal deposition of radioactive material in their bodies. Nursing mothers are now showing measurable amounts of radioactive contamination from Fukushima in their milk.

The openness and transparency in the nuclear industry that is called for by Mikhail Gorbachev is not present. In relation to Chernobyl, none of the governments in Russia, Belarus or Ukraine are interested in a comprehensive survey of the consequences. They prefer to close the case, gradually re-cultivate the land and resettle lost territory and pay as little as possible to the victims. They are not interested in discussions about the mistakes that have been made. There is a tendency amongst the International Atomic Energy Agency (IAEA) and the United Nations Scientific Committee for the Effects of Atomic Radiation (UNSCEAR) to support this position. Independent scientific studies in this area are not being financed and are being obstructed or prevented. Radiation damage is difficult to prove. Large epidemiological studies are expensive and reference to necessary data requires access that is only possible with state assistance.

In North Wales 330 farms are still being screened for the effects from Chernobyl of the irradiated land on the sheep farmed there. It is notable that the authorities wish to now change the way the condition of the sheep are assessed worrying local farmers who suspect that the public will lose confidence in the quality of the meat.

In Britain it is the same government proclaiming a strengthening of local democracy and concern about our environment, especially in relation to climate change, that is also removing the people's right and ability to discuss and oppose the introduction of nuclear power. The government is also passing legislation that will subsidise the nuclear power industry to an average of £50m per annum until 2030 through setting a carbon floor price, despite promises and declarations that the public will not be subsidising the industry. This is against the flow of events internationally. Many governments are bringing an end to the nuclear industry. Others are being forced to reopen the debate. What will it take for this government to do the same?

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