

Chernobyl: A 'Debt to the Truth'

The HBO miniseries 'Chernobyl' engaged our hearts - but not our minds. We need to shift focus from the USSR to the Western nuclear lobby.

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The HBO miniseries "Chernobyl" is a timely reminder of the horrors of nuclear technology gone wrong.

In the early hours of 26 April 1986, an accident occurred in northern Ukraine that revealed once again that all the genius and inventiveness of nuclear technology is powerless against human error. Machines could save no-one.

The HBO drama painstakingly detailed the events of that night: the botched experiment that led to an explosion that ripped a 2,000 ton concrete roof off the reactor; the fire that lasted ten days and released 100 times the amount of radioactivity as Hiroshima.

Vivid portrayal

We watched as the scientists struggled in the first ten days to avoid an even worse outcome. If the molten mass were to penetrate through the concrete floor and come into contact with water, a nuclear explosion might take place with huge swathes of Europe rendered uninhabitable.

We observed the work of the "liquidators", the army of men, numbering anywhere between 600,000 and 800,000, drafted in from all over the Soviet Union, to clean up the site and the contaminated territory.

Some shovelled graphite off the roof of Reactor 4, in an atmosphere so radioactive that they could stay only a minute or two before retreating. Over the next few years, the liquidators built the first sarcophagus, cleared away topsoil, buried whole villages, washed down roofs, and shot radioactive dogs and cats abandoned in these villages.

We watched as the men who were exposed to the highest levels of radioactivity died, decomposing from within, and contaminating anyone who came near them, including their wives and unborn children.

The miniseries was a brilliant piece of work: well written, well acted and well filmed. It did exactly what a good drama should do. It portrayed vividly what it was like for those people to face the worst technological disaster in history. It was hard to watch and hard not to cry.

Debunking myths

So far so good. The viewing public learnt how devastating a nuclear accident can be. How disappointing then that the opportunity to understand Chernobyl, its true health effects and

the cover-up of those health effects, has been squandered.

The series has done nothing to debunk the myths about Chernobyl. We will not be able to avoid a repeat of history unless we face up to these realities.

The first myth is that Chernobyl was a "Soviet" accident. Surely, the West is told, only the USSR would cut corners and produce a second-rate nuclear reactor with inherent defects that needed only human error to result in a nuclear catastrophe.

The nuclear industry in the West was perfectly aware of RBMK reactor technology and there is no evidence that the West ever warned that an accident was waiting to happen. At that time, the capacity of the USSR to develop nuclear technology and expand its fleet of nuclear power stations was a source of admiration and perhaps a little fear in the West.

Besides, the UK had experienced its own nuclear accident in 1957 at Windscale, the US in 1979 at Three Mile Island and in 1999, days before the millenium, the French escaped a near meltdown at a nuclear power station near Bordeaux.

Nuclear accidents

On the night of 27 December 1999, a storm destroyed forests across Europe but before crossing the continent, the winds hit the French coast and a hundred million litres of water broke over the sea walls and flooded the Blayais reactor. The cooling system failed, then the diesel back up system failed, and finally two of the four essential service pumps failed.

A government spokesperson admitted that they were within twelve hours of a meltdown. This accident at Blayais bears many similarities to the accident at Fukushima in 2011. The nuclear lobby would like the public to believe that Fukushima was the result of a natural disaster, but even the Japanese parliamentary panel reporting in 2012, a year after the accident, said that it was a "man-made" disaster.

TEPCO had simply not built the reactor to withstand the earthquakes and tsunamis which occur regularly in Japan. Equally, a French parliamentary report had recommended in 1997 that the sea wall around Blayais be heightened half a metre, but EDF had postponed the work till 2002.

There is nothing "Soviet" about nuclear accidents.

Death toll

The second myth surrounding Chernobyl concerns the death toll from the accident. The majority of sensible people are suspicious of the figures put about by the nuclear lobby (30 to 50 deaths) but struggle to understand the larger figures put out by organisations like Greenpeace, that involve tens or hundreds of thousands of deaths.

It suits the nuclear lobby for this discrepancy to exist in our minds. It allows them to paint Greenpeace and similar organisations as extremists and doom mongers. The discrepancy also conveniently obscures the dangers of low level radiation that causes illness and premature death in the vicinity of every nuclear reactor in Europe.

It is perfectly true that between thirty and fifty people died in the weeks following the accident from acute external radiation poisoning. The HBO drama concentrated on these

(admittedly horrific) deaths, but it is not acute radiation poisoning that accounts for the hundreds of thousands of deaths following Chernobyl.

Illnesses and premature deaths caused by Chernobyl are due instead to chronic internal low level radiation from the ingestion of food grown on contaminated soil.

Apart from the victims of acute external radiation poisoning, who died in 1986, there are three other groups of people who suffer illness and premature death in the contaminated territories of Chernobyl.

Liquidators

The first are the liquidators, whose mortality and illness is mentioned briefly at the end of the HBO drama. Whether they removed graphite from the roof of Reactor 4 – the "organic robots", who received horrendously high levels of radiation, or whether they dug up fields and villages and received a lower dose, the liquidators all inhaled particles of radioactive material in varying amounts. These particles remain in the body and will eventually lead to cancer or other illnesses.

In 2001 at a World Health Organisation conference in Kiev, the Chief Medical Officer of the Russian Federation said that 10 percent of his liquidators had died and 30 percent were ill. Extrapolated over the total number of liquidators from all over the USSR, this suggests that even in 2001, between 60,000 and 80,000 liquidators had already died and between 200,000 and 300,000 were ill.

The average age of the liquidators in 1986 was 33. We do not know about these men because the USSR not only lied about the levels of radioactivity they received but they also forbade doctors and hospitals from attributing illness and death to the accident.

Likewise, we do not know how many are still alive today, and if they have died, their cause of death will never be verified.

Evacuees

The second group of victims are the evacuees from the towns and villages in the vicinity of the reactor who should have been evacuated immediately but remained for a few days in extremely dangerous conditions.

The third group are the million peasant farmers living in the most contaminated villages in Belarus, Ukraine and Russia. Their illness and premature death is the result of the chronic ingestion of food, morning noon and night, contaminated at low levels with radionuclides.

The radionuclides accumulate in the body and have effects on every organ of the body, in the medium and long term. There are villages where no children are healthy.

It must be remembered that children are far more vulnerable to the effects of radiation. A foetus is 100 times more vulnerable to the same amount of radiation as an adult male. (Just for the record, our internationally accepted "safe" limits are based on an adult male).

Health effects

The viewer watching Craig Mazin's miniseries will be moved to tears but will be no nearer to understanding the devastating health effects that continue today in the contaminated territories around Chernobyl.

The harm comes from tiny particles lodged in the organs of the body, accumulating gradually over time. "No matter how small, if an area that has been subjected to intense ionisation for a sufficient time, cancer will proliferate throughout the body. It is in fact the body's reaction to the exhaustion it experiences from trying to repair one very specific site that has been destroyed innumerable times".

But cancer with its long latency period is not the only illness caused by this chronic internal low level radiation, which causes disorders in every organ and system of the body. The list (not exhaustive) includes cataracts, heart irregularities, diabetes, digestive problems, neurological problems, fertility problems, birth defects, chronic infections, and genetic effects.

The illness and death suffered by the victims of Chernobyl has been documented in a book published by the New York Academy of Sciences in 2009. *Chernobyl: Consequences of the Catastrophe on People and the Environment* brings together 5,000 scientific papers mainly from the three worst affected countries but also from the rest of Europe.

It is often forgotten that 57 percent of the radioactive fallout occurred outside Belarus, Ukraine and Russia. By way of illustration, one of the studies in the NYAS book details the doubling of the incidence of Down's Syndrome in Lothian Scotland, an area that received fallout from Chernobyl (Ramsay *et al*,1991).

Valeri Legasov

The real disinformation in Craig Mazin's miniseries is the almost total absence in his account of the role played by the nuclear lobby.

Any accident, anywhere in the world at a nuclear power station is of intense concern to the nuclear lobby because it threatens the industry. As early as August 1986, the IAEA (International Atomic Energy Agency) were in Moscow, directing the cover up. They remained in constant communication over the next five years, making abstract calculations about radiation levels and health effects and manipulating the data.

IAEA officials were carefully scrutinising the Soviet scientists they met, strengthening ties with those who adopted the nuclear industry line, and disparaging those wayward individuals who inconveniently insisted on telling the truth. Legasov was one of these wayward individuals.



The central character of the HBO miniseries is **Valeri Legasov**, brilliantly portrayed by Jared Harris. Legasov was a good man, who helped oversee the extinction of the fire in the first ten days, knew the true extent of the contamination, and the health consequences that would result.

When Legasov took his own life on the second anniversary of the accident, it was the culmination of a two year battle with the nuclear lobby.

Persecution

From August 1986, four months after the accident, the IAEA and the ICRP (International Commission on Radiological Protection) were already at work, pressuring the USSR to lower their estimates of deaths resulting from the accident.

Legasov had presented them with a voluminous document consisting of a general report and an Annexe. The stumbling block for the West were the 70 pages of Annexe 7 entitled "Medical and Biological Problems" in which Legasov contended that there would be at least 40,000 deaths.

Over the next year of so, Legasov and other independent scientists were worn down in a process one commentator has called "the stages of submission to the lies". A collaboration of IAEA officials and tame Soviet establishment scientists minimised future health effects, threatened economic ruin if large populations were evacuated, and attacked independent scientists.

Four days before his death, Legasov, already persecuted in Moscow, heard that the nuclear lobby at an UNSCEAR conference on Sydney had massaged his figures down again, to a mere 4,000 possible deaths.

At the same conference, the IAEA made the decision that the Soviet people living in the "nuclear gulag" could live perfectly healthy lives with levels of radioactivity five times higher than officially recommended levels elsewhere on the planet. Legasov felt he had betrayed his people and he saw only one way out.

Ethos

The nuclear lobby has been active in the contaminated territories ever since. Organisations with names like Ethos, funded by the French nuclear lobby, were sent in to advise the population that "living with Chernobyl means learning to live again, to live another way, integrate the presence of radioactivity into daily life as a new component of existence".

Ethos has no expertise in health and offers no medical care. They muzzle the few independent scientists and doctors who are genuinely involved in the health of the population and who accurately measure levels of radioactivity in soil and foodstuffs.

While the independent scientists and doctors working in the contaminated villages receive no money other than donations from charitable NGOs in the West, Ethos has seemingly limitless funds, which allow it to bribe the corrupt governments of the three countries concerned, whose overwhelming priority is to minimise the health effects and save money.

Ethos is now active around Fukushima in Japan, persuading the population to return to areas contaminated at levels higher than the evacuated zones of Chernobyl. "Ethos Japan"

organises "rehabilitation" programmes, oversees confidentiality agreements between various university hospitals and the IAEA, and disparages the work of independent scientists.

Ethos threatens legal action against journalists like Mari Takenouchi who have the temerity to suggest that returning people to contaminated areas amounts to an experiment on human beings.

Responsibility

Fukushima was the price the Japanese paid for the lies told about Chernobyl. The lie told by the nuclear lobby is that a nuclear accident is not only survivable but something for which we should prepare.

We are being prepared now for the next nuclear accident with funding being provided by the EU for agricultural research into growing crops after large scale radioactive contamination of our lands.

Evacuation plans for a future nuclear accident are being prepared and it is proposed that the safety limits be raised from 1 mSv per year to 20 mSv per year in a post-accident scenario, as has happened in Japan.

Mazin lays the blame for the accident and for the lies told about the health effects at the door of Soviet Russia. But why be surprised that the USSR tried to cover up the accident and its likely effects? They have always lied to their people.

It is the nuclear lobby in the West who are effectively responsible for the world's ignorance on this matter. The leaders of Ukraine, Belarus and Russia are simply the local administrators of policies that emanate from the Permanent Members of the Security Council of the United Nations (United States, France, Great Britain, China and Russia) and are legitimised by the IAEA and other organisations of the nuclear lobby.

The World Health Organisation has shamefully abdicated its responsibility in matters of radiation and health because it is subordinate in the UN hierarchy to the IAEA.

Debt to the truth

In his book *The crime of Chernoby*l, Wladimir Tchertkoff wrote: "A deliberate scientific crime has been going on for twenty eight [now 33] years at the heart of Europe, sanctioned at the highest level against the background of disinformation and general indifference.

"In order to preserve consensus about the nuclear industry, the nuclear lobby and the medical establishment are knowingly condemning millions of human guinea pigs to experience new pathologies in their bodies in the vast laboratories of the contaminated territories of Chenobyl".

Craig Mazin has barely scraped the surface in uncovering the truth about Chernobyl: "Every lie we tell incurs a debt to the truth, Sooner or later that debt is paid".

These are the words spoken by Legasov, the hero of Mazin's miniseries. It is the central emotional message of the drama. But Mazin has betrayed Legasov, and all the other brave independent scientists, not named in the series, and he has betrayed the victims who still

live in "the nuclear gulag", by telling only half of the story.

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Susie Greaves translated The Crime of Chernobyl: The Nuclear Gulag, a 700-page account of the accident and its aftermath by Wladimir Tchertkoff. The book was published in France in 2006 by Actes Sud, in the <u>UK and the USA</u> in 2016, and now also published in Russia and Japan.

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