THIRD WORLD

RESURGENCE

ISSUE No. 248 KDN PP6738/01/2012 (026876) www.twnside.org.sg

DEATH KNELL FOR NUCLEAR ENERGY?

ISSN 0128-357X

Editor's Note

AS the world stands transfixed by the nuclear reactor crisis in Japan, painful memories are being revived of the 1986 nuclear disaster in Chernobyl, Ukraine. Ironically enough, as the Fukushima nuclear crisis, which began on 11 March, spills over into the month of April, it coincides with the 25th anniversary of the Chernobyl disaster. On top of that, this April also marks the 32nd anniversary of the Three Mile Island nuclear accident in the US. Although the latter occurred on 28 March 1979, it was only effectively brought under control in April when the containment steam in the reactor was vented to the atmosphere in order to stabilise the nuclear core.

These grim coincidences should have served to awaken even cynics to the dangers posed by nuclear power. Indeed, many who were never part of the anti-nuclear movement have been sufficiently shaken by the Fukushima crisis to question the claims of nuclear energy as a safe alternative to fossil fuels. While talk of a 'nuclear renaissance' before the advent of this latest crisis was somewhat exaggerated, there is no denying the fact that the issue of carbon emissions and global warming and the consequent debate on fossil fuel alternatives had led to some confusion as a result of the embrace by some naive climate change activists of nuclear power. It should be abundantly clear now that nuclear power is anything but safe.

But not even a crisis as far-reaching as Fukushima has been sufficient to silence the nuclear lobby. From the very inception of this crisis, they have gone on overdrive to obscure the real issues which it has raised. Apart from intoning ad nauseam that Fukushima is not another Chernobyl, their favourite ploy appears to be to plead some sort of exceptionalism. It is suggested that the exceptional combination of a severe earthquake and a gargantuan tsunami overwhelmed the built-in safety mechanism of a reactor whose design belonged to an earlier generation of reactors. Current designs, unlike the old designs of the Fukushima reactors, fully address these contingencies, claim the votaries of nuclear power.

One problem with this line of argument is that it has been advanced after every major nuclear disaster. After the Three Mile Island accident, it was argued that the newer generation of reactors were safe – until the Chernobyl disaster blew up these claims. When public memories of these earlier accidents began to fade and the climate change debate gave a fresh boost to the claims of nuclear power, the industry renewed its public relations drive to sell its newer generation of reactors equipped, it was claimed, to meet all contingencies. As noted above, the Fukushima disaster has not put an end to this high-pitched sales gimmick.

But the more fundamental flaw in this whole claim is that it is based on the illusion that it is possible to anticipate every possible contingency and provide a foolproof mechanism to successfully meet every one of them. When it comes to contingencies and risk, there are, to use the grandiose phraseology of former US Defence Secretary Donald Rumsfeld, 'known knowns', 'known unknowns' and 'unknown unknowns'. Earthquakes and tsunamis are 'known knowns' and the Fukushima reactors were constructed with inbuilt mechanisms to cope with this risk. But even in meeting this contingency which 'we know we know', the system failed. The reactors responded to the earthquake correctly by shutting down, but the backup diesel power generator system designed to continue the cooling of the reactors was overwhelmed by the tsunami. It is not that the designers failed to anticipate and make provision for a tsunami. They did, but while the reactors were designed to cope with a 5-metre tsunami, the height of the tsunami that hit Fukushima Prefecture turned out to be some 15 metres! So much for the 'known knowns'. But what of the risks 'we know we don't know' and the risks 'we don't know we don't know'?

In a word, the whole case for nuclear energy crumbles once we admit that, in designing nuclear reactors, it is humanly impossible to provide for every risk. Once this proposition is conceded, and it is acknowledged that a nuclear accident is an unacceptable price to pay, then how is one to justify nuclear energy as a safe option?

The Fukushima nuclear crisis has taken place in one of the most technologically advanced countries. While the combination of the earthquake and tsunami has already claimed almost 14,000 lives, the final death toll may take many years to ascertain in view of the protracted process of radiation deaths. Likewise, the economic cost from the twin disasters has been staggering as an economy which until recently was the world's second largest struggles to avoid a slump. But with the nuclear crisis itself showing no sign of abating, the task of recovery can hardly begin. As the shape of the final denouement cannot at this stage be even fathomed, the whole economy is sapped by the climate of uncertainty.

In short, this is the terrible price that an advanced industrialised country has had to pay for the folly of resorting to nuclear energy. If, after all this, developing countries embarking on the nuclear energy venture fail to draw the appropriate lessons from this disaster, they will have only themselves to blame.

The cover story for this issue considers, amidst the backdrop of the anniversaries of the Three Mile Island accident and the Chernobyl disaster, the implications of the Fukushima tragedy for the future of nuclear energy. In addition to articles which analyse the problems and perils of nuclear power in general, others consider these risks in the light of national plans to invest in nuclear energy. As for the public health aspect, we highlight the attempts by the International Atomic Energy Agency (IAEA) to cover up the full extent of the Chernobyl disaster's adverse health impacts, as well as the failure of the World Health Organisation (WHO) to sufficiently alert and educate the public on the dangers of nuclear energy because of its incestuous relationship with the IAEA. We believe that, in dealing with an issue of such critical importance, WHO should be free of any constraints on its independence.

– The Editors

Third World
RESURGENCE
www.twnside.org.sg
No 248 Apr 11 ISSN 0128-357X

The eruption of the Fukushima nuclear crisis, which coincides with the 25th anniversary of the Chernobyl disaster, has raised serious questions about the future of nuclear energy. Picture shows Japanese anti-nuclear protesters taking to the streets. 11

THIRD WORLD RESURGENCE is published by the Third World Network, an international network of groups and individuals involved in efforts to bring about a greater articulation of the needs and rights of peoples in the Third World; a fair distribution of world resources; and forms of development which are ecologically sustainable and fulfil human needs.

THIRD WORLD RESURGENCE is published monthly by Third World Network, 131 Jalan Macalister, 10400 Penang, Malaysia. Tel: 60-4-2266728 Fax: 60-4-2264505. Email: twnet@po.jaring.my
Printed by Jutaprint, No. 2, Solok Sungai Pinang 3, 11600 Penang, Malaysia.
Cover Design: Lim Jee Yuan

From health service to health care industry

One of Britain's most cherished institutions, the National Health Service has come under the axe of David Cameron's conservative government as part of its austerity drive. *Jeremy Seabrook* comments.

IN November 2010, a US think-tank, the Commonwealth Fund, published a report that stated that Britain is the only one of 11 industrialised countries where wealth does not determine access to health care. Perhaps this is why the National Health Service (NHS) is under attack from the Conservative/ Liberal coalition government in Britain, a coalition which has staked everything upon 'deficit reduction', but is, at the same time, undertaking the most far-reaching 'reforms' of the health service since its inception in 1948.

The health service in Britain became a major part of the welfare state, that historic compromise between capital and labour following the war against Nazism and Fascism in 1945. The welfare state was a pledge that 'never again' would the inflation and insecurity that seized Germany in the 1930s give rise to the extremism and violence that led to conflict and left Europe in ruins, strewn with bones and ashes.

Such a noble endeavour did not go uncontested. Those of us old enough to remember, recall fierce objections to the introduction of health care free at the point of delivery; and Aneurin Bevan, the radical Labour politician responsible for it, admitted it had been achieved only by 'stuffing the doctors' mouths with gold'. A poll of members of the British Medical Association in February 1948 found 40,000 opposed the service and only 5,000 in favour. The Conservative popular press published dire warnings that the poor would rush to furnish themselves with the amenity of spectacles, and have all their teeth drawn for the sake of free dentures.

These benign publications gave little publicity to the backlog of untreated sickness and undiagnosed disease, much of it a consequence of industrial life – cancers, consumption and lung diseases caused by exposure to hazardous materials, years of malnutrition that stunted bodies and deformed limbs, and left a legacy of disability and early death among industrial workers and their families; a legacy which still remains, since life expectancy in parts of Glasgow is still 12 years less than that in southern England.

A demonstration in support of the UK National Health Service. The British government has, among others, demanded £20 billion in 'efficiency savings' from the NHS, which has already led to ruthless cuts in services.

Improvement in health care

Over the years, the National Health Service became one of Britain's most cherished institutions. Set up at a time of extreme austerity in the late 1940s, it nevertheless addressed harsh inequalities of health care, and led to an unprecedented improvement in the growth and nurture of a new generation, an extension of life expectancy and the relief of debilitating and painful conditions which the poor had stoically borne in the past: I can remember the women of my childhood, afraid to consult a doctor, hoping that the lump they had discovered in their abdomen or breast would pass with the use of patent medicines bought from the chemist; and in due course, they died, often in great pain, without even speaking of their symptoms to those they loved. We always passed the monumental bulk of our local infirmary (the very word implied debility) with apprehension, for it was common knowledge that hospitals were places where people went to die. We held our breath as we walked by 'the fever hospital', site of the casualties of Victorian industrial life, abridged by insanitary conditions and outbreaks of cholera, diphtheria and typhoid well into the 19th century.

It is significant that the 'compromise' between capital and labour reached in the Western world after the Second World War lasted only as long

as the power of organised labour. With the erosion of that power, decay of the Soviet Union and the ideology of a single global economy that poured into the vacuum, the labour of the world entered into fierce competition for the privilege of serving a capitalism to which 'no alternative' was triumphantly proclaimed. This has permitted those who have bided their time, waiting for the balance of global power to tilt away from labour, to embark upon a dismantling of the welfare state in the West, and to embark upon a profane pilgrimage of return to a capitalism that knows nothing of human need, and everything of the necessity for profit.

They have been patient, these enemies of human well-being. Even Margaret Thatcher, whose great project was the demolition of manufacturing industry in Britain, did not openly attack the health service, although she was content to see it wither from lack of support. Indeed, the mass unemployment engendered by her successful attempt to 'integrate' Britain into a global division of labour – including the 'big bang' which deregulated the finance industry – depended upon the welfare state to mute the human impact of the disemployment of millions.

Tony Blair, Labour's messiah, as it were, to the Tories' prophet, Margaret Thatcher, introduced aspects of the market into the National Health Service. Under the Private Finance Initiative, a programme of hospital building was initiated, whereby capital would be provided by the market and repayment deferred to the decades to come. Although he was also an enthusiast of 'competition', 'choice' and a plurality of 'health care providers', his government tripled investment in the health service. The people of Britain insisted they didn't want competition or choice: they just wanted good, reliable health care when they needed it. At the end of Labour's period in power, almost 90% of the people of Britain said they found the health service 'good' or 'excellent'.

Of course the society in which the health service exists is quite different from that in which it was set up. No

The then Health Minister Aneurin Bevan meeting an early beneficiary of the National Health Service, which came into being in 1948 as a major part of the British welfare state.

one imagined in 1948 that the cost of alcohol- or drug-related disorders would consume so many resources, nor that traffic accidents and criminal injuries would make such demands, nor even that life expectancy would have stranded so many people in hospital wards at the end of their days. These changes have placed strains on a service where demands have risen and thousands of people now routinely visit Accident and Emergency hospital departments for minor ailments, while the emergency ambulance service last year had to deal with trivial calls – a woman who had a problem with her knitting, a car-driver who wanted to know the time, a man who complained about the birdsong that kept him awake at night, Elvis sightings, UFOs and requests for taxis.

Sabotage

During the period of Labour government, their Conservative opponents were busily working away at ingenious means to sabotage a health service which it was their highest ambition to transform into a 'health care industry'. This quiet work of demolition became headline news in August 2009, when a Conservative Member of the European Parliament, Daniel Hannan (former speechwriter for past leaders of the Conservative Party), described the NHS in a US TV interview as 'a relic' and a '60-year-old mistake'. Other prominent Conservatives called the NHS 'a national sickness service', and accused it of being 'no longer relevant to the 21st century', and 'failing to meet public expectations'. David Cameron, who has shown himself a master of dissimulation, rendering plausible his mendacity by means of indignation whereas Tony Blair relied on righteousness, was quick to distance himself from these remarks, saying that he stood 'four-square' behind the NHS. He has also invoked his gratitude to the NHS for the care it gave to his six-year-old son who died of cerebral palsy in 2009.

This personal tribute appeared to have been reinforced in the 2010 election campaign, when Cameron promised 'no more top-down reform' of the health service. Immediately after the formation of the coalition, he announced the most sweeping reorganisation since 1948, whereby consortia of doctors, general practitioners, would receive 60% of the health budget to commission care. They would be 'free' to buy in treatment from 'any willing provider', private companies, charities, not-for-profit companies or existing health service employees. That this simple expedi-

ent is a prelude to privatisation is obvious: general practitioners will require advisers, experts and advocates to ensure they are getting the best treatment, or 'value for money' (a tautologous piece of commonsense on the tongue of every politician). This opens the way to large-scale US and other private interests, not a few of which have made significant contributions to Conservative Party funds. Providers will be paid 'according to performance', as though health care were some kind of cabaret act.

The present government has adopted so many policies which appeared in no election manifesto – indeed these were peppered with denials that any such policies were even contemplated – that the issue is no mere matter of 'broken promises' (all parties do that), but of deception so blatant that they are close to forfeiting their claim to have been legitimately elected; a serious breach of those very 'democratic processes' which the whole world is exhorted to emulate. The justification for all this depends upon an abuse of the language of 'modernisation', 'radical reform', the meaningless declaration that 'doing nothing is not an option' – a political idiolect unintelligible to most people.

The Liberal Democrats, junior partners in the coalition, have been under pressure from their supporters to block the 'reforms'; and such has been the outcry of professionals in the health service – who are of a different order from those who resisted tooth and nail the introduction of the NHS 63 years ago – that the government has said it will 'pause, listen and engage' and modify some of the more extreme passages of the current Bill passing through Parliament. They will insert some democratic control over 'consortia' which will commission treatment for patients whom we may expect any time now to see re-branded as 'customers'.

Despite having promised 'no more top-down reform' of the health service during his election campaign, British Prime Minister David Cameron *(pic)* **has gone on to announce a sweeping reorganisation that marks a prelude to privatisation.**

Free-market ideology

David Cameron has taken on the task of completing a process initiated with such panache by Margaret Thatcher, extending to the public sector the privatisations and free market ideology which resulted in the de-industrialisation of Britain in the 1980s and 1990s. While promising to increase spending on the health service 'year on year', he has simultaneously demanded £20 billion in 'efficiency savings', which have already led to significant cuts in services.

It is an epic project. The world is watching; for at the very moment when it is clear that India, China, Brazil, Indonesia and other advancing economies (are they economies or countries? – the words have become interchangeable) must introduce some form of protection for their most vulnerable people against the ravages of global capitalism, the West – the model supposed to inspire them – is busy destroying by guile and subterfuge the very shield their people required against the violence of free markets. It would be a great irony if, far from creating the 'level playing field' with its upstart competitors which it claims, the West should clutch in its dotage at the discredited dogmas of *laissez-faire*, an ideology it was obliged to abandon as a result of the human wreckage with which it littered the 19th century, even as the 'emerging' world overtakes it, both in economic success and in humanitarian protection for its people.

If the present administration incessantly invokes the future, modernisation and reform, this is precisely because it is hurtling Britain backwards into the familiar, but far from comforting, embrace of an ideology which makes people captive once more, hostages to markets, whose freedom is the highest law. ◆

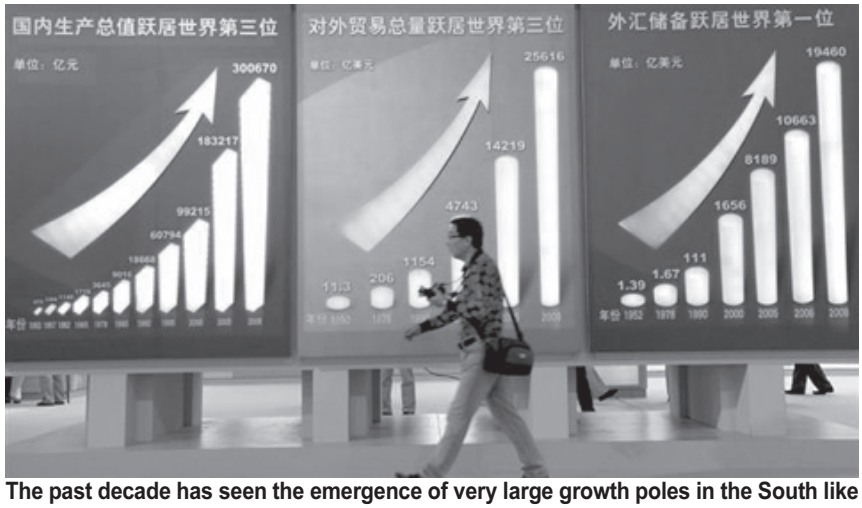
Over the years, the National Health Service became one of Britain's most cherished institutions, addressing harsh inequalities of health care.

Jeremy Seabrook is a freelance journalist based in the UK.

The 'rise of the South' and what it means

While there is much talk about the 'rise of the South', there is little clarity as to what this phrase means. Attempts to forecast the future development of the developing countries on the basis of the distinctive trends of the last decade are somewhat misplaced, says a senior UN economist.

Richard Kozul-Wright



The past decade has seen the emergence of very large growth poles in the South like China *(pic)*.

THE rise of the South over the past decade in both economic and political terms has been a defining feature of the new millennium. It has encouraged a lot of people to make projections based upon what has happened over the last decade, projecting 10, 20 years forward, and defining a very different type of international economic order with clearly very extensive opportunities for increased South-South cooperation. And that is very encouraging for us. There is however, I think, the danger of endorsing the trends that occurred over the past decade and even perhaps encouraging a kind of return to business-as-usual thinking, which we need to be careful about. There is a need, within the context of thinking about the rise of the South, to present a more nuanced developmental agenda.

Economic convergence

What we do know about the last decade is that the combination of slower per capita growth in advanced countries and faster growth in the South meant that the first decade of the new millennium was one of what economists refer to as economic convergence. If you listen to the World Bank or the International Monetary Fund (IMF), this is somehow seen as an endorsement of their interpretation of their promotion of globalisation and an endorsement of the kind of fundamentals that they have been promoting over the course of the last few decades. That is not a position that we in UNCTAD (the United Nations Conference on Trade and Development) would find very satisfactory. A lot of that convergence has to do with the ongoing success story of East Asia. And that is not a success story that can be squeezed into a Washington Consensus view of economic policy.

The per capita income growth in sub-Saharan Africa over the last decade was also higher than the per capita income growth in the United States. This was the first time that sub-Saharan Africa did grow faster than the richest countries for a sustained period of time. In fact, looking at the figures, something like four out of five developing countries over the past decade grew faster than the United States on a per capita basis, compared, for example, to the period between 1960 and 2000 when only one in three developing countries was actually growing faster than the US. So the convergence story in the last decade is certainly a tangible and important feature of what has been happening in the global economy.

It is however the case that the rise of the South has taken place in the context of persistent global and maximal economic imbalances. Boom-bust development cycles have been a persistent feature of the background against which the developing countries have risen. It is also the case that the past decade saw not only a failure of most developed countries to accelerate in terms of their growth performance but a failure of many developing countries to improve their investment performance. There was a failure of developed countries to deal with growing inequalities within their countries, although that was also a feature of many developing countries. It was also a period of growing indebtedness in many advanced countries. All those features of global and national imbalances are of course in one way or another linked to the dominant role of international finance in shaping globalisation over the course of the last two decades.

This is the context in which the new growth poles in the South have

emerged. This was not simply an emergence of the smaller developing countries growing rapidly but it was a period in which a number of very large developing countries have been growing and sustaining rapid rates of economic growth. Even if you look at a larger group of large developing countries – Brazil, China, Indonesia, Pakistan, South Africa – then it is certainly the case that as a group these countries have been growing very quickly and to some extent this distinguishes the last decade from the 1970s, which was also a period of economic convergence. It was a period when the advanced countries slowed down and when many developing countries were able to sustain very rapid periods of economic growth. But the driving forces of growth predominantly in that period did not come from the very large developing countries. It came from the East Asian economies. It came from the oil-exporting economies. So the emergence of very large growth poles in the South does seem to be an important feature of the past decade of successful economic growth.

Despite that fact and despite this combination of slowdown in the North and rapid growth in the South, this is not a period in which the South successfully decoupled from the North. There is a lot of talk in the literature about decoupling of emerging economies from the North. However, there is very little evidence, with the exception perhaps of East Asia, that in fact, growth in the South has become decoupled from growth in the North. Nor is this a period of convergence within the South itself. There is very little evidence that within the South there has been a narrowing of income gaps. If anything, divergence within the South was a prominent feature of the past decade.

So in a way, despite the optimistic signs, this was a period of non-inclusive and non-sustainable growth amongst developing countries. And particularly as the advanced countries enter a period of difficult adjustment and slower growth, it is very important now to ask whether South-South links can fill the gap that will be vacated by the slow-growing advanced countries and whether South-South links will be able to sustain the kind of faster economic growth and economic dynamism and convergence of the past decade. This question is an old question. It is a question that the economist Arthur Lewis asked at the end of the 1970s. It is the kind of question that is very much on our minds in UNCTAD. We will be looking at whether South-South links can actually sustain the kind of growth dynamic that we have seen in the South over the course of the past decade and a half. Or whether there are still major gaps amongst those links that will lead to problems moving forward and will make some of the simplistic projections that you read about in the press something to be a little bit wary about.

South-South cooperation

In terms of the South-South links that we have seen over the course of the last decade, I think it is very important to understand that there has been a hierarchy within the South. The rise of South-South cooperation has very much been a trade-driven process. South-South trade has been rising on a very steady basis since the early part of this millennium. South-South trade now exceeds 20% of world trade. And it is estimated that something like 50% of total developing-country trade is trade amongst each other. So it has become a prominent part of the global trading system and has in many respects been the leading engine of South-South cooperation.

This is followed by investment flows – foreign direct investment (FDI) flows – which have also grown particularly quickly since around 2000-02. But South-South links are not as prominent within total FDI flows as they are within trade flows. On our estimates, something like 8-9% of global foreign direct investment is accounted for by South-South FDI flows. And although there are emerging signs of growing South-South financial flows, these are a very small component of global financial flows. South-South financial flows remain a very small part of the South-South cooperation story and changing that situation is a major challenge for the South-South agenda moving forward.

One thing that worries us in this discussion is the extent to which South-South cooperation has remained an East Asian story. When you look at the figures on South-South linkages and cooperation, the prominence of East Asia within that is unavoidable. In terms of trade flows, in terms of investment flows, they dominate the picture of South-South cooperation. And there is little doubt that the dominance of the Asian story in that context is linked intimately to the successful industrialisation of the East Asian region over the past three or four decades. This does raise the troubling issue of the different types and patterns of South-South links that have been evolving over the course of the last decade or two and the development implications of those different types of linkages.

UNCTAD has insisted for a long, long time that what you trade does matter to your development prospects. And what you trade on a South-South basis will matter as much to your development prospects as traditional types of trade relationships. We know that the regional dynamic has been very important in the context of the success of the East Asian story. We talked for a long time in UNCTAD about the type of 'flying geese' pattern that emerged in East Asia and the recycling of the industrial capacities that was an important part of that regional growth dynamic and an important reason why a number of countries in that region began to catch up in the 1970s and 1980s.

We know that China has reinforced many of those regional dynamics and has maintained many of the patterns that were familiar from an earlier generation of successful developing countries from that region. We are also aware, however, that there are concerns. There is this worry that many of the elements of this pattern of development still rely not so much on final markets in developing coun-

tries as on Northern markets. It is also the case that within this type of development story there are still enclaves of development rather than an inclusive pattern of development. And that is particularly true of some countries at the lower levels of the regional integration story.

Within the context of this regional pattern of development, middle-income countries appear to have become trapped within a particular pattern of industrial development which seems to lock them into a level of development from which it is going to be very difficult to move to the next stage. Countries that have already built industrial capacity successfully through the regional development story now find it difficult to move to the next stage of development where they would have more capital-intensive and technologically sophisticated activities and products. This middle-income trap is something that worries us in UNCTAD; we are attempting to see whether stronger South-South cooperation can somehow break this trap for countries that do face it.

The final element in the picture that we want to present when it comes to examining South-South cooperation is the issue of how the successful, productive integration stories seen for example in East Asia can be married to complementary trade arrangements and, just as importantly, complementary monetary and financial cooperation arrangements which, working in a consistent and complementary manner, can maintain a cumulative and interactive growth story. This type of growth will be pivotal in determining whether the rise of the South that we have seen over the last decade and a half indeed does produce the catch-up and convergence process that many people are predicting, avoiding along the way the possible inconsistencies and traps that could easily derail that kind of successful development picture. ◆

Richard Kozul-Wright is a senior economist at UNCTAD. The above is the text of a presentation made at the South Centre Workshop on Global Economy, Climate Change and Sustainable Development held in Geneva on 26 January. It earlier appeared in the South Bulletin *(Issue 53, 15 March 2011) published by the South Centre.*

India-EU free trade agreement: Rethinking banking services liberalisation

India's policy makers should seriously reconsider the provisions in the country's proposed free trade agreement with the European Union which require it to open up its banking sector, says *Kavaljit Singh*.

SINCE 2007, India and the European Union (EU) have been negotiating a free trade agreement (FTA) – covering trade in goods and services, investments, intellectual property rights and government procurement – that is fraught with problems. Till now, 10 negotiating rounds have been held. The agreement is expected to be finalised by mid-2011.

A Standard Chartered bank branch in Pune, India. Most branches of EU-based banks are located in metropolitan areas and major Indian cities where the bulk of the premium banking business is concentrated.

One of the major underlying themes in the ongoing negotiations is the liberalisation of trade and investment in banking services. With the help of the FTA with India, the EU is seeking greater market access and export gains for its banks through cross-border supply and direct investments. Some of the key demands emanating from Europe include removal of all barriers to market access (commercial presence, cross-border supply and consumption) and grant of national treatment commitments.

The EU banks and powerful lobby groups such as the European Services Forum (ESF) have put forward a slew of demands including removal of all restrictions pertaining to branch licences, foreign ownership (of both public and private banks), numerical quotas, equity ceilings, differential taxation, and voting rights. The ESF is seeking removal of priority sector lending on locally incorporated EU-owned banks besides removal of current restrictions under which branch licences may be denied if foreign banks' aggregate share of the banking market exceeds 15%.

Another key demand of the ESF relates to the removal of restrictions on foreign banks' participation in exchange-traded commodity products. The ESF has also demanded free access to deposits made by state-owned companies.

By asset size, six out of the top 10 foreign banks in India are EU-based. The 9 EU-based banks together controlled 65% of total assets of foreign banks in India in 2008. Hence, the policy implications of opening up the Indian banking sector under the India-EU FTA would be markedly different from other FTAs such as the India-Singapore Comprehensive Economic Cooperation Agreement.

The burgeoning financial services trade

Though there are 27 member states of the EU, the banking services agenda is aggressively pushed by the UK and Germany. The UK is one of the leading centres for global banking, with the largest share of cross-border bank lending (18%) in the world. Financial services alone account for 8.3% of its GDP.

The UK remains the leading exporter of financial services in the world. According to estimates by the industry organisation IFSL, the UK's financial sector net exports were £41.8 billion in 2009 despite the global financial crisis. Banks were the largest single contributor, with net exports of £25.3 billion. The bulk of UK banks' net exports were generated through spread earnings (£10.6 billion), with the largest contribution by derivatives.

In terms of the UK's balance of trade in goods and services in 2009, trade surpluses generated by financial services (£40.2 billion) managed to partially offset large deficits in goods (£82 billion). The UK's financial services trade surplus with India was £206 million in 2007, with banks contributing £197 million. Over the years, Germany and Ireland have also registered significant trade surpluses in financial services.

Tapping diaspora remittances

A number of Indian banks (especially big private banks) are also striving for an increased presence in Europe. It is interesting to note that Indian banks are not aiming at capturing the highly competitive domestic banking markets in Europe. Rather their aim is to tap the non-resident Indians (NRIs) based in EU member

states. Since India is the largest remittance recipient country in the world ($55 billion in 2010), Indian banks are keen to serve this lucrative business segment by increasing their presence in the European banking markets.

Of late, some domestic banks have also been facilitating the acquisition of European companies by big Indian corporations. For instance, ICICI Bank co-financed United Spirits' takeover of Scotch whisky distillers, Whyte & Mackay, in 2007 and Tata Motors' $2.3 billion takeover of Jaguar and Land Rover in 2008.

The lure of niche banking markets

The motives behind EU-based banks entering Indian banking markets are obvious due to the immense profit opportunities and a stable banking system. For London-headquartered Standard Chartered, India became the largest contributor to the bank's global operating profits in 2010. The bank's profits in India reached $1.2 billion in 2010. For UK-based HSBC Holdings, Europe's largest bank by market capitalisation, India was the seventh largest contributor to its global profits in 2008.

By and large, European banks are interested in serving three niche market segments in India: upmarket consumer retail finance, wealth management services and investment banking. Several European banks (such as Societe Generale and BNP Paribas) are keen to expand their presence in niche markets such as private banking. The big-ticket mergers and acquisitions (particularly in the cross-border segment) taking place in corporate India require investment banking, underwriting and other advisory services where big European banks have a competitive edge over domestic banks.

The urban-centric European banks

To date, most of the branches of EU-based banks are located in metropolitan areas and major Indian cities where the bulk of the premium banking business is concentrated. As of March 2010, there were nine EU-based banks operating in India with a network of 213 branches. Out of these, 163 branches (76.5%) were located in metropolitan areas, 45 (21%) in urban areas and merely five (2.3%) in semi-urban areas.

It is distressing to note that EU-based banks have not yet opened a single branch in the rural areas. This is despite the fact that several EU banks have been operating in India for more than 150 years. Established in 1858, Standard Chartered Bank is the oldest foreign bank in India. BNP Paribas and HSBC began their operations in India in the 1860s.

Not surprisingly, European and other foreign banks are not serving the poor and low-income people residing in metropolitan and urban areas. There is no regulatory ban on foreign banks serving the urban poor and low-income people.

The extent of financial exclusion in India

In India, financial exclusion has strong linkages with poverty and is predominantly concentrated among the poor and marginalised sections of society. Various studies have measured the extent of financial exclusion in India. The National Sample Survey Organisation of the Ministry of Statistics and Programme Implementation carried out the All India Debt and Investment Survey (AIDIS) 2002-03 to assess the indebtedness of Indian farmers. The Survey revealed that 45.9 million farmer households in the country (nearly 51%) do not have access to credit, either from institutional or non-institutional sources.

One of the negative consequences of banking sector reforms is the decline in bank branches in rural areas even though the total number of bank branches in India has increased. The total number of bank branches of all scheduled commercial banks (including regional rural banks) increased from 72,752 at end-June 2007 to 76,518 at end-June 2008 but the share of rural branches declined to 40.7% at end-June 2008 from 42.1% at end-June 2007. In 1991, the share of rural branches was the highest (58.5%). In other words, the recent spurt in bank branches has worsened the rural-urban ratio.

In August 2005, the Reserve Bank of India issued a list of 391 underbanked districts in India with population per branch more than the national average of 16,000. The underbanked population is higher in the north-eastern and eastern regions.

Since the 1990s, the banking sector has witnessed a secular decline in agricultural credit. This is in sharp contrast to the 1970s and 80s when a significant shift in bank lending in favour of the agricultural sector took place. The state-owned banks contributed 77.3% of total credit to agriculture at end-March 2007 while the remainder was contributed by the private sector and regional rural banks.

Besides, there has been a significant decline in bank lending to small- and medium-sized enterprises (SMEs) since the 1990s. The SMEs account for almost 40% of India's total production and 42% of exports and are the second largest employer after agriculture. The SMEs produce over 8,000 value-added products and are involved in several services sectors.

The exclusive banking model

Since European banks have no branches in the rural areas, they are not obliged to serve the vast sections of rural households who are excluded from the formal banking system. Their contribution in the opening of 'no frills' bank accounts under the financial inclusion programme has been abysmal.

Typically, foreign (and big domestic) private banks are averse to providing banking services to the poor because they find such clients less lucrative.

In particular, foreign banks tend to follow 'exclusive banking' by offering services to a small number of clients. Several EU-based banks and their lobby groups have expressed their discomfort in fulfilling the mandatory priority sector lending requirements. Rather they prefer a niche banking model with no riders in terms of social and developmental banking.

It is well established that not only do foreign banks in India charge higher fees from customers for providing banking services, but maintaining a bank account requires substantial financial resources. Given the fact

that the average upmarket retail banking customer can be 10 times more profitable than the average mass-market retail customer, it is highly unlikely that the commercial interests of European banks would match the developmental needs of the unbanked population. Rather the liberal entry of European banks may constrict access to banking services in the country: geographically, socially and functionally.

Some pertinent questions

In the context of the proposed India-EU trade agreement, the following questions need to be put before the trade negotiators:

Will European banks augment the reach of the banking system to millions of Indian citizens who do not have access to basic banking services? Will EU-based banks undertake social and developmental banking? Can European banks meet the targets of financial inclusion for rural households, as suggested by the Committee on Financial Inclusion? Would European banks open their branches in low-income neighbourhoods? What extraordinary services would European banks provide to serve the unbanked population? What specialisation and experience do European banks have when it comes to providing basic banking services to landless rural workers and urban poor dwellers?

The fallout of the global financial crisis

Several European banks had acquired US-based mortgage and 'toxic' financial assets whose value plummeted sharply during 2007-08. This contributed to a sudden loss of confidence within the European banking system as banks became reluctant to lend to one another, thereby causing a dramatic loss of liquidity.

The highly leveraged EU-based banks (particularly in the UK, France, Germany and Ireland) sought billions of euros of state help to rebuild their balance sheets battered by the financial meltdown.

The European governments provided more than €3 trillion through guarantees and recapitalisation schemes to save the ailing banks. Since the financial crisis badly infected the real economy, the EU economies are not out of the woods yet as there are renewed worries about rising unemployment.

Post-crisis, serious questions have been raised about the strength and credibility of European banks. The global financial crisis has put a big question mark around their efficiency, 'best practices' and state-of-the-art risk management models. The crisis has also exposed the poor corporate governance and transparency norms of several European banks.

Given the higher degree of interconnectedness among EU banks, problems in one country quickly put the entire financial system at risk. Without doubt, the EU is facing unprecedented challenges in maintaining financial stability and strengthening banking regulations.

In contrast, the Indian banking system has largely remained insulated from global turmoil thanks to the limited presence of foreign banks, negligible exposure of domestic banks to US sub-prime markets and related financial instruments, and enlarged state ownership of the banking system. Often criticised as 'inward-looking' and 'conservative', India's regulatory framework also acted as a key determinant in protecting the domestic banking system from the global financial turmoil.

Rethinking the benefits and costs of banking sector liberalisation

The proponents of banking services liberalisation tend to overlook the potential costs associated with the entry of foreign banks into host countries. If the entry of foreign banks is allowed through acquisition of domestic banks, it may lead to a concentration of banking markets and loss of competition.

The foreign banks can be a source of cross-border contagion from adverse shocks originating elsewhere. A large presence of foreign banks from crisis-ridden countries could lead to rapid transmission of financial shocks to the host countries.

The parent bank may also reduce exposure in a host country or move out completely due to losses suffered in home or other countries. Post-crisis, foreign banks have drastically reduced lending in India. During 2009-10, the loan portfolio of foreign banks contracted by 9.7%. The UK's Royal Bank of Scotland has decided to exit from or shrink its operations in 36 countries (including India and China) due to problems at its parent bank.

In addition, it is highly debatable whether foreign banks' presence has a stabilising role in the event of a systemic crisis. In Argentina, for instance, several foreign banks chose to leave the country when a financial crisis erupted in 2001.

Furthermore, the entry of foreign banks poses new challenges to regulation and supervision. The regulatory and supervisory authorities are restricted to within their national borders while foreign banks can easily cross national borders and operate internationally. The overall responsibility for the parent bank remains with the regulatory authorities in the home country. But there is little coordination and sharing of information among the regulatory authorities of home and host countries.

The global financial crisis has proved beyond doubt that increased financial integration can transmit financial shocks across countries. Financial innovation in certain unregulated products and markets can also augment financial shocks. The crisis has highlighted the risks associated with the presence of large financial conglomerates in the domestic banking system. Post-crisis, several proposals for enhanced regulation and supervision of financial conglomerates (which operate in different segments such as banking, insurance, securities and private equity) are under consideration at various levels.

Keeping these new developments in view, the policy makers should rethink the benefits of opening up banking services under the framework of the India-EU FTA. ◆

Kavaljit Singh works with Madhyam (www.madhyam.org.in), a New Delhi-based policy research institute which addresses finance, trade and development issues. This article is an excerpt from a Briefing Paper published by Madhyam.

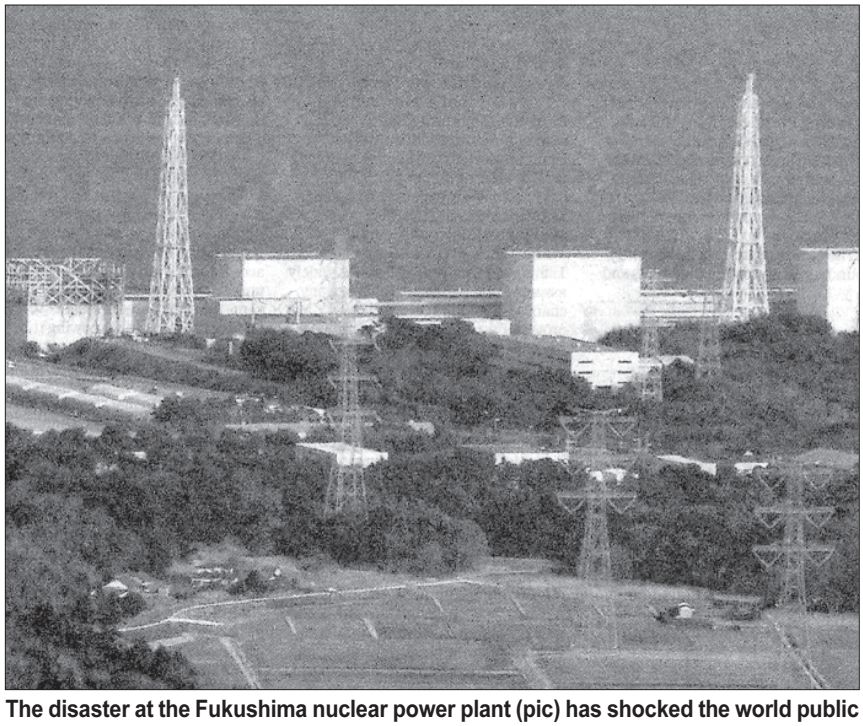
Chernobyl to Fukushima: The hazardous journey of nuclear power

Three partial core meltdowns and other crises at the Fukushima nuclear power station in Japan have precipitated a nuclear nightmare. Coinciding with the anniversaries of the 1979 Three Mile Island and 1986 Chernobyl nuclear disasters, this is a wake-up call for the world, says *Praful Bidwai*.

IT was a mere coincidence, if a tragic one, that the Fukushima nuclear disaster in Japan happened just a few weeks short of the 25th anniversary of the Chernobyl catastrophe in Ukraine, which falls on this 26 April. Chernobyl is the world's worst-ever industrial accident, far worse than the Bhopal gas leak disaster of December 1984.

Some 3,000 to 3,500 people perished in Bhopal in the first week of the chemical accident. The death toll from the illnesses caused by that exposure has since risen to an estimated 15,000 to 20,000.

In Chernobyl, the number of additional cases of cancers and leukaemias caused by radiation is estimated to range from 34,000 to 140,000, leading to 16,000 to 73,000 fatalities. Some studies, including one published by the New York Academy of Sciences, put the number of fatalities at more than 10 times higher than the last figure.



The disaster at the Fukushima nuclear power plant (pic) has shocked the world public and precipitated what is likely to be the greatest ever crisis of the global nuclear industry.

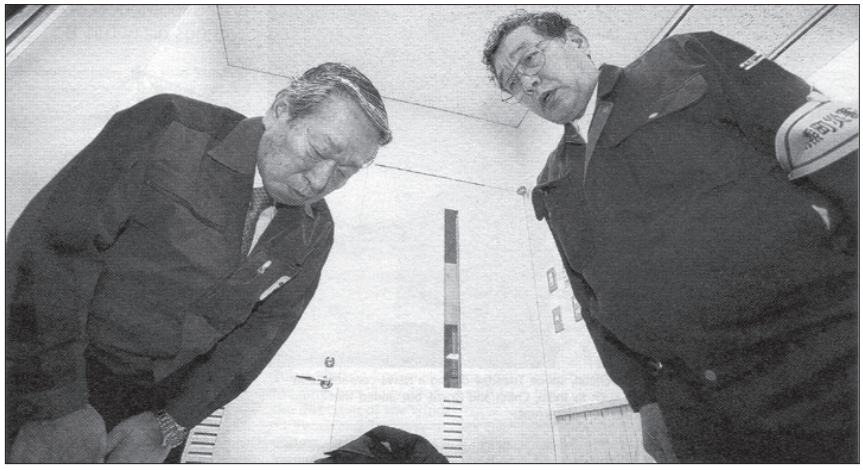
It is another coincidence that Fukushima coincided with one more landmark: the 32nd anniversary of a grave accident at the Three Mile Island nuclear plant near Harrisburg, Pennsylvania, in the United States. This led to a partial core meltdown in a pressurised water reactor on 28 March 1979, and was the most significant accident in the history of the US commercial nuclear power industry.

In many ways, however, the Fukushima disaster was not a coincidence at all. It was only waiting to happen. A part of that inevitability is attributable to the siting of as many as six reactors in a highly seismic area close to a subduction zone, where tsunamis tend to occur. Some of it is explained by the flaws of the Boiling Water Reactor (BWR) design of the United States multinational General Electric. Yet another part is attributable to the questionable operating practices and accident management of the station operator, Tokyo Electric Power Co (TEPCO).

However, some of the inevitability arose, as we see below, from the nature of nuclear technology and its inherent hazards. The bitter truth is, all existing nuclear reactors in the world, regardless of the type of fuel and coolant they use, and irrespective of their configuration, are vulnerable to serious accidents with potentially catastrophic radioactivity releases.

The Fukushima reactors were not designed to cope simultaneously with a huge earthquake of magnitude 9 on the Richter scale and a tsunami. TEPCO knew this. In 1995, 2002 and 2007, it had to shut down reactors at several of its stations. In 2007, there was a radioactivity release from the Kashiwazaki-Kariwa plant, the world's largest nuclear power station. But TEPCO concealed this and other material facts on nearly 200 occasions.

Other Japanese operators too have practised deception. For instance, in 1995, one of them released an altered video of a fire at a fast-breeder reactor – an even more hazardous reactor type than normal ones – to conceal the damage. They all got away with this because of their collusive relationship with the regulator, Japan's Nuclear and Industrial Safety Authority (NISA).



Tokyo Electric Power Co (TEPCO) Vice President Norio Tsuzumi bowing in apology to the mayor of a town near TEPCO's Fukushima power plant. Part of the apparent inevitability of the Fukushima disaster is due to TEPCO's questionable operating practices and accident management.

Anatomy of a disaster

What happened at Fukushima on 11 March? The three operating reactors (of a total of six) shut down, as planned, when the earthquake happened. The back-up power supply came on, as planned, through diesel generators. But an hour later, the generators failed, probably because they had been flooded by the tsunami. In a serious lapse in safety design, the generators were located at a low level instead of at an elevation. There was a tiny battery back-up, which could have operated the valves of the control rods which can damp down a nuclear fission reaction. But that soon failed. There was a full station blackout. The reactors were now headed for serious trouble.

With loss of coolant water, the reactors' cores heated up and some fuel was damaged, leading to a build-up of extremely flammable hydrogen. A series of explosions took place in the reactor buildings, which wrecked their walls and roofs, making radioactivity releases likelier. The top priority now was to cool the reactors with water – freshwater or even seawater – with specially procured, dedicated, powerful pumps.

TEPCO relied on fire pumps which were ineffectual. According to some analysts, TEPCO, anxious to save the reactors, delayed pumping seawater into them: seawater corrodes reactors, which then would have to be written off. Helicopters were eventually deployed to pour seawater over the reactors, but much of it was lost to the wind.

The reactors kept heating up and their cores lost water cover, leading first to significant leaks, and then to large-scale releases of radioactivity. To contain the overpressure from building up to a dangerous point, the plant engineers periodically released steam carrying radioisotopes into the atmosphere. It also contained molecules in which a part of the normal hydrogen had been replaced by its toxic heavy isotope, tritium.

By the end of the first week, Reactors 1, 2 and 3 were in acute distress, with overheated and exposed fuel. The much-feared nightmare, a partial core meltdown, was coming true.

Two new complications soon arose. Following the General Electric design, the reactors' intensely radioactive spent fuel was stored in water pools in the reactor building itself. This water must also be cooled, but wasn't. The spent fuel heated up and the water evaporated, leading to further releases of dangerous isotopes like iodine-131, caesium-137 and strontium-90. The situation became particularly grim in one of the reactors (Number 4) which had been shut down before 11 March. The roof of its spent-fuel pool blew off, adding to radioactivity releases.

The second complication was also rooted in design. Reactor 3 burnt a mix of plutonium and uranium oxides (MOX) as fuel instead of the normal slightly enriched uranium. The use of MOX is known to generally 'increase the consequences of severe accidents in which large amounts of radioactive gas and aerosol are released compared to the same accident in a reactor using non-MOX fuel …', according to an expert of the Union of Concerned Scientists (UCS) of the US. 'As a result, the number of latent cancer fatalities resulting from an accident could increase by as much as a factor of five for a full core of MOX fuel ….' Reactor 3 therefore may have contributed more than the other reactors to the radioactivity releases from Fukushima.

Also in play was yet another design-related problem, that of a structurally weak primary containment, the steel vessel which encloses the reactor. General Electric's Mark-I containment is considered by experts to be 'unusually vulnerable' to failure in the event of a core-meltdown accident. 'A recent study by the US government-run Sandia National Laboratories shows that the likelihood of containment failure in this case is nearly 42%. The most likely failure scenario involves the molten fuel burning through the reactor vessel, spilling onto the containment floor, and spreading until it contacts and breaches the steel containment-vessel wall.'

Radiation release

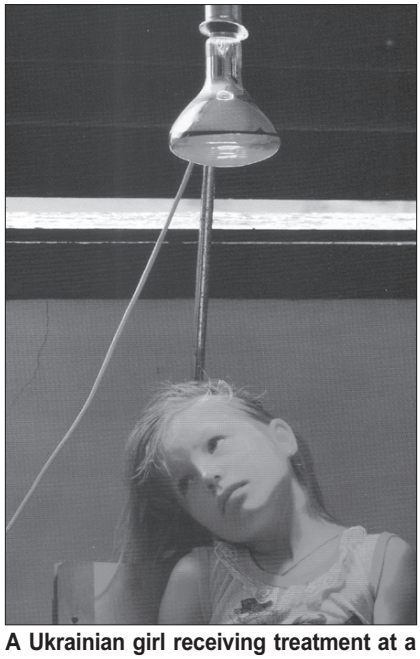
During the first few days of the crisis, radiation levels in the reactor control room were reportedly 8,000 times the maximum permissible. Ra-

dioactivity at the station gate soon recorded an alarming 1,000 millisieverts *an hour*, several thousand times the highest permissible radiation dose for plant employees (30-50 millisieverts *a year*).

By the second week of the crisis, milk and vegetables in Fukushima and nearby prefectures were found to have higher-than-permissible concentrations of iodine-131 and caesium-137. Radiation from the reactors had spread hundreds of kilometres away. Tap water in Tokyo, 220 km away, was found to have been radioactively contaminated, and the government advised people not to give it to babies. People were evacuated from a zone within a 20-kilometre radius from the plant, while those living between a 20-km and 30-km radius were advised to leave.

Many independent experts believe that the evacuation zone should have been extended. The US Embassy in Japan, following the US Nuclear Regulatory Commission's assessment, advised evacuation for American citizens living within 80 km. By the third week of the crisis, caesium-137 concentrations at a distance of 40 km from Fukushima had reached up to 3.7 megabecquerels per square metre (the becquerel is a unit that measures the rate of disintegrations per second). This is more than double the level of 1.48 units which was set as the threshold for evacuation in Chernobyl. A region 30 to 40 kilometres northwest of Fukushima recorded a dose rate above 125 microsieverts per hour, a level at which immediate evacuation is often advised.

No reliable estimates have yet emerged of the number of people exposed to radionuclides from Fukushima, or the doses they absorbed. Such exposure carries a high health risk, including cancers and leukaemias. Iodine-131 has a short half-life (the time during which it naturally decays to half its original mass) of eight days. It gets rapidly absorbed in the thyroid gland. Caesium-137 behaves much like potassium and is absorbed in a wide range of tissues. Strontium-90 is attracted to bones, being chemically similar to calcium.



A Ukrainian girl receiving treatment at a hospital in Cuba for the effects of the 1986 Chernobyl nuclear catastrophe, the world's worst ever industrial accident.

Caesium-137 and strontium-90 both have half-lives of about 30 years. They will have a significant presence even a century from now.

Turn for the worse

The crisis took a turn for the worse in its third week. Although engineers restored electric power to the station, they only succeeded in turning on lights. Most other systems, including instrumentation that allows workers to know what is happening in the reactor cores and spent-fuel pools, did not operate. The reactor cores were not adequately cooled. Nor were their spent-fuel pools. Reactors 1, 2 and 3 are estimated to contain 1,496 bundles of fuel. The spent-fuel pools of the four reactors have 2,724 bundles.

A 20-centimetre crack developed in a shaft carrying cables to the Reactor 1 building, from which large quantities of highly irradiated water leaked. As its water tankage got filled, TEPCO dumped over 10,000 tonnes of radioactive water into the sea.

Seawater radioactivity in Fukushima's immediate vicinity reached concentrations millions of times higher than permissible levels. TEPCO engineers made several attempts to plug the crack with desperate means such as using newspapers and even sawdust, but did not succeed for three days. On 6 April, TEPCO announced that the leak was plugged. But it is not clear if the seal is reliable and can withstand mounting pressure from a trench filled with highly radioactive water.

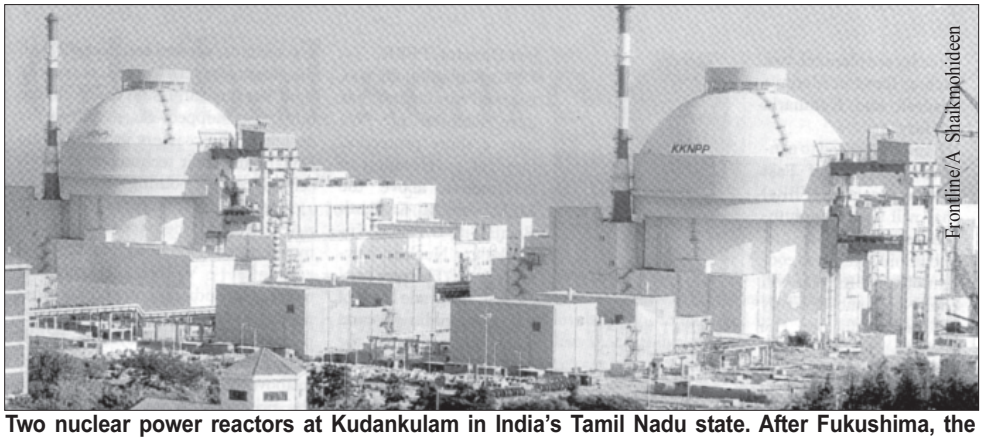
Fukushima has released a large quantity of toxic radioisotopes. According to one estimate, based on data from the monitoring stations of the Comprehensive Test Ban Treaty Organisation, a United Nations body, roughly 20% of the iodine-131 and 50% of the caesium-137 released in the Chernobyl accident were released from Fukushima within the first few days. A later estimate says the two releases are about the same. Fukushima's inventory of caesium is 40 times higher than Chernobyl's.

A columnist in *Nature* (5 April) writes: 'The implications of the available data on contamination are far-reaching. … [It] seems likely that in some areas, food restrictions could hold for decades, particularly for wild foodstuffs such as mushrooms, berries and freshwater fish.'

One month after the Fukushima crisis began, it remains unresolved. Reactors 1, 2 and 3 have undergone a partial core meltdown. US Energy Secretary Steven Chu estimates the Reactor 1 core damage at 70%. And the Energy Department says the damage is 33% in Reactor 2. Reactor 3 warrants great concern because of MOX fuel. The spent-fuel pools too continue to pose problems. Four reactors will be written off. But their entombment will pose new problems.

TEPCO and NISA have subjected workers at Fukushima to high radiation doses by rewriting the rule book and raising the maximum permissible one-time dose from 50 millisieverts to 250 millisieverts. Trenches outside the reactor buildings, especially Reactor 2, are full of highly contaminated water, with radiation levels of 1,000 millisieverts an hour – high enough to cause acute radiation syndrome within an hour.

Says a UCS scientist: 'The volume of radioactive water is so large



Two nuclear power reactors at Kudankulam in India's Tamil Nadu state. After Fukushima, the Indian government has come under public pressure to review its nuclear programme.

that [workers] are running out of places to store it. To cut down on the volume of water they need to remove and store, they are trying to reduce the amount of water they pump into the reactors to cool the fuel in the cores. But without that cooling, the fuel … has been heating up. This leads to a buildup of pressure in the reactor that may require additional venting of radioactive gas to the atmosphere. If the heating becomes great enough, it can also lead to additional fuel damage and further release of radioactive gases ….'

The Fukushima crisis will be with us for several years. As yet, there are no reliable estimates of the quantity of the fuel that may have melted. But it may be substantial.

Nuclear industry crisis

Fukushima has shocked the world public, upset energy generation plans in many countries, and precipitated what is likely to be the greatest-ever crisis of the global nuclear industry. The industry already faces stagnation and decline. Nuclear power generation peaked worldwide in 2006-07 and has been declining by 2% annually.

The US nuclear industry has not had a new reactor order since 1973. It never recovered from the Three Mile Island (TMI) accident of 1979. Chernobyl dealt a body blow to the European nuclear industry. Chernobyl could be attributed to shoddy design and operational practices in industrially backward Ukraine. Fukushima happened in a country that has the world's third largest fleet of nuclear reactors and is technologically highly advanced.

The sequence of events at Fukushima may be special, even unique. But a station blackout can happen for a variety of reasons, without a natural disaster. Engineers who have designed, operated and licensed nuclear reactors say all existing reactor types can undergo a catastrophic accident – with different sequences but the same end-result. Nuclear reactors are extremely complex, and internally, tightly coupled high-temperature high-pressure systems. A small mishap in one sub-system gets quickly transmitted and magnified, throwing the reactor into a crisis that can neither be anticipated nor controlled.

It is delusional to think that the Fukushima disaster was caused by the earthquake and tsunami. They merely triggered a crisis in reactors that were vulnerable to a grave accident in the first place. Many other nuclear disasters, including loss-of-coolant accidents and core meltdown, such as Chalk River (Canada, 1952), Windscale (UK, 1967), Three Mile Island (US, 1979) and Chernobyl (1986), were caused by operator error, equipment degradation or failure, failure of emergency back-up, and loss of power. Natural disasters only make nuclear accidents more likely.

The nuclear industry has persistently underestimated the probability of a core-damage accident. In 1975, the Rasmussen Report said the probability was one in 20,000 years of reactor operation in the US. But TMI happened within 500 years of operation. On current industry estimates, the frequency of a core-damage accident in the world's total of about 440 reactors would be once every 45 to 100 years. But such accidents have happened once every eight years in the world since 1970.

The US has responded to Fukushima by ordering a safety review of all its 104 reactors, including as many as 23 General Electric BWRs. Since TMI, the US has recorded 17 'near-misses' or serious accidents in nuclear reactors – including four since 1990. These were all 'significant precursors' of core damage.

Germany, Switzerland and China have suspended their nuclear programmes. Germany has rescinded its recent decision to extend the phaseout of all nuclear reactors by 12 years. Many other countries, including Turkey, Syria, Jordan, Poland, Egypt, Bangladesh, Brazil, Israel, Saudi Arabia, Nigeria and the UAE, which had announced plans to build new reactors are likely to put them on hold. Nigeria has already cancelled them.

Areva of France, the world's largest nuclear corporation, has said that the Fukushima crisis is likely to cause delays in the construction of its new European Pressurised Reactor. The first EPR under construction, in Finland, has been delayed by 42 months, and is 90% over budget and mired in bitter litigation. Areva's own EPR in France, at Flamanville, could face a moratorium on its construction, according to Electricite de France.

Indian complacency

Among all the countries with substantial nuclear power expansion plans, India alone has not announced a 'pause-and-review' approach. India's Department of Atomic Energy remains complacent and basically denies the gravity of the Fukushima

catastrophe. Its first response to the core damage, leading to a hydrogen explosion, was: 'It was purely a chemical reaction and not a nuclear emergency….' DAE secretary Srikumar Banerjee described the unfolding disaster as 'an unusual situation due to natural disaster'.

Nuclear Power Corporation chairman SK Jain was even more blasé: 'There is no nuclear accident or incident …. It is a well-planned emergency preparedness programme …to contain the residual heat after … an automatic shutdown.'

A fortnight later, the DAE admitted that the Japanese disaster was serious, but said such accidents cannot happen in India; the DAE's safety systems are superior. It even denied the possibility in respect of two reactors at Tarapur, of the same design (General Electric's Boiling Water Reactor) as Fukushima's.

The DAE said its installations would withstand major earthquakes and tsunamis. Jain boasted: 'We have got total knowledge … of the seismic activities. Worst seismic events and tsunami have been taken into consideration in our designs.' But TEPCO had made similar claims.

The DAE's record of safety is embarrassingly bad for a small nuclear programme which contributes less than 3% to national electricity generation. The DAE has exposed hundreds of workers to radiation doses above the maximum permissible limit, including over 350 by the early 1980s at Tarapur alone.

DAE installations have witnessed serious accidents. In 1993, a fire broke out at Narora, less than 200 km from Delhi. It started in the turbine room because of unsafe practices against which the manufacturer had warned. It spread to the reactor building. The management panicked and violated emergency protocols. The fire ended accidentally, not by design.

At Kaiga, a containment dome being built over a reactor – the last line of defence in case of a radioactivity leak – collapsed. The design and construction methods were faulty. It is too frightening to think of the consequences had this happened with a working reactor. In 1995, the Rajasthan Atomic Power Station leaked radioactive waste into a lake for two months. In 2003, six workers at the Kalpakkam reprocessing plant were exposed to excessive radiation doses – admittedly 'the worst accident in radiation exposure in the history of nuclear India'.

Kaiga also witnessed suspected sabotage in November 2009, when workers were found to have high levels of tritium in their urine. Tritium, a heavy isotope of hydrogen, is toxic and raises the likelihood of cancer. According to the plant authorities, it was spiked into a drinking-water cooler. The saboteurs were never identified. Nor is it known how they had access to the tritium, and how they could insinuate it into the sealed cooler.

The DAE refuses to acknowledge the thorny problem of nuclear wastes, generated at every stage of the so-called 'nuclear fuel cycle', from uranium mining to reactor operation to spent-fuel storage or reprocessing. High-level wastes remain hazardous for thousands of years. Science has no way of safely storing them for long periods, let alone neutralising them.

Public scrutiny

The DAE has got away with unsafe practices because it is not subject to public scrutiny or regulation. India has no independent authority that can evolve standards and regulate reactors for safety. The Atomic Energy Regulatory Board (AERB) is toothless and dependent for its budget, equipment and personnel on the DAE. The Atomic Energy Act 1962 allows the DAE to conceal any information it likes.

After Fukushima, the Indian government has come under public pressure to review the nuclear programme. A recent statement signed by 60 eminent citizens said: 'We strongly believe that India must radically review its nuclear power policy for appropriateness, safety, costs, and public acceptance, and undertake an independent, transparent safety audit of all its nuclear facilities, which involves non-DAE experts and civil society organisations. Pending the review, there should be a moratorium on all further nuclear activity, and revocation of recent clearances for nuclear projects.' (Available at www.cndpindia.org)

The government is still resistant to proposals to pause and review its nuclear programme. But Prime Minister Manmohan Singh has hinted at limited change. He reminded DAE scientists on 29 March: 'The people of India have to be convinced about the safety and security of our own nuclear power plants. We should bring greater openness and transparency in the decision-making processes … and improve our capacity to respond to the public desire to be kept informed about decisions and issues that are of concern to them. I would like to see accountability and transparency in the functioning of our nuclear power plants.'

He added: 'I have already directed a technical review of all safety systems of our nuclear power plants using the best expertise available ….' However, it is not clear if this review will be done by an independent body which includes non-DAE experts and civil society organisations. The only significant commitment by Singh is to 'strengthen the AERB and make it a truly autonomous and independent regulatory authority ….'.

India may separate the AERB from the DAE. But to be effective, a reorganised AERB must include independent experts and not brainwashed scientists who believe that nuclear power is inherently safe, indispensable and desirable. But even a reformed AERB won't be enough. If India wants to avert nuclear disaster, it must radically rethink its nuclear power policy. ◆

Praful Bidwai <prafulbidwai@gmail.com> is a New Delhi-based columnist, social science researcher, and activist in the environmental, human rights, peace and global justice movements. A Fellow of the Transnational Institute (www.tni.org), he is co-author, with Achin Vanaik, of South Asia on a Short Fuse: Nuclear Politics and the Future of Global Disarmament *(Oxford University Press, 2001).*

Report from Fukushima

It is time to embark on a clearer concept of safety, contends a scientist who strongly believes that foolproof safety in nuclear power is a myth and in whose company *Suvendrini Kakuchi* recently visited Japan's nuclear-stricken prefecture.

MY decision to visit Fukushima – the area worst hit by the massive quake, tsunami and nuclear power accident on 11 March – was taken one afternoon in the week of 28 March after a long meeting with scientists.

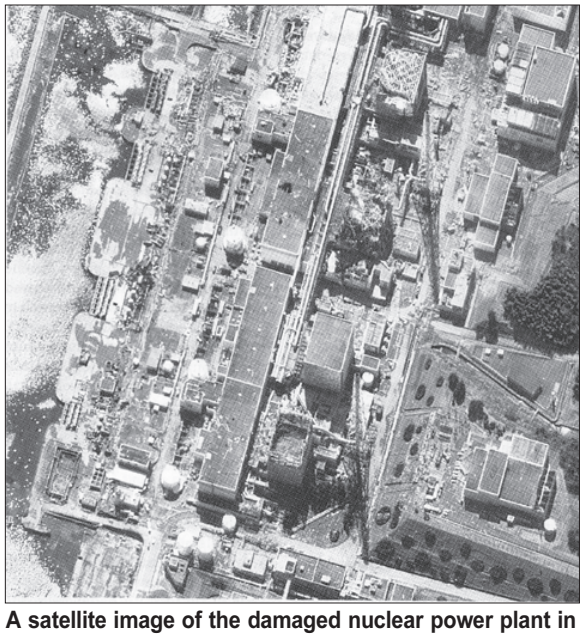
The invitation to accompany the scientists on a private fact-finding mission to Fukushima was irresistible. The scientists and engineers who gathered that day had, for decades, harboured misgivings over reactor safety design and policies and were active in the ongoing debate over the future of nuclear energy in Japan.

'There is a dire need for a real-time radiation monitoring network to be set up in areas affected by the damaged Fukushima Daiichi nuclear power plant,' Atsuto Suzuki, head of the high-energy accelerator research organisation at Tsukuba University, explained. 'This is where our expertise can begin to play a role.'

We started our journey at 6 am, armed with bottles of mineral water, clothing that could be discarded before our return to Tokyo, and special facemasks to protect us from radiation when we approached the 20-kilometre exclusive zone around the damaged reactors.

Around our necks dangled radioactive dosimeters, resembling large thermometers. The machines would show accumulated microsieverts of radiation contamination on our bodies and instructions were given that we carry them all the time to record the rise in the figures while noting the exact locations.

'Our own documentation of radioactive material is key to understanding the Fukushima accident,' explained Yoichi Tao, a physicist specialising in risk management design, who is now retired. He is also a graduate from Tokyo University.



A satellite image of the damaged nuclear power plant in Fukushima.

But Tao is not part of the cosy group of experts who have guided Japan's ambitious post-war nuclear power industry. Instead, having experienced the atomic bombing of Hiroshima when he was just six years old, the scientist contends the bitter truth that Japan had chosen to ignore till today was that foolproof safety in nuclear power is simply a 'myth'.

'It is time,' he explained, 'to embark on a clearer definition of the complex concept of safety. This calls for research from diverse perspectives – the views of residents, independent opinions, as well as taking in an assessment on the impact of the accident on other countries.'

Devastation

The three-hour drive to Fukushima was hauntingly poignant. With most of the motorways now open for traffic, we passed the breathtaking scenery that marks Japan's northern region – mountains dotted with pristine pine forests on one side of the road and the pale blue, now serene, ocean glistening on the other. Sharp gusts of chilly air wrapped our car on a near-empty road, a sign of the lost appeal of Fukushima – which had been up till now a tourist destination boasting therapeutic hot springs and fresh seafood.

A harrowing scene awaited us at Iwaki, our entry point into Fukushima. Iwaki, a bustling coastal fishing city, had borne the full brunt of the tsunami, with some waves as high as 14 metres.

We stopped at Yotsukura hamlet where half the population of 1,000 had suffered fatalities, were still missing, or had lost their homes, fishing boats and cars.

People, protected with masks, appeared dazed while they pulled at piles of washed-out rubble in a feeble attempt to reconstruct. 'The community is still scattered in evacuation sites because shops continue to lack food and water and there is a severe shortage of gasoline,' explained Yuuji Kojima, head of the rescue operation in the local municipality.

The afternoon schedule was to get as close to the nuclear disaster as possible and the route we selected was not along the coast but inland. Getting closer to the vicinity, we passed miles of deserted villages where dogs and cattle – abandoned by their owners – walked past shuttered houses and broken roads.

The sky had begun to darken and we feared rain that would worsen our

risk of contamination. We pulled on our masks and another layer of clothes. Then we watched our monitors.

Passing the 30-kilometre limit, a recent extension of the risk zone ordered by the government, we reached Miyakoji-machi, once a lush farming area, now turned a ghost village.

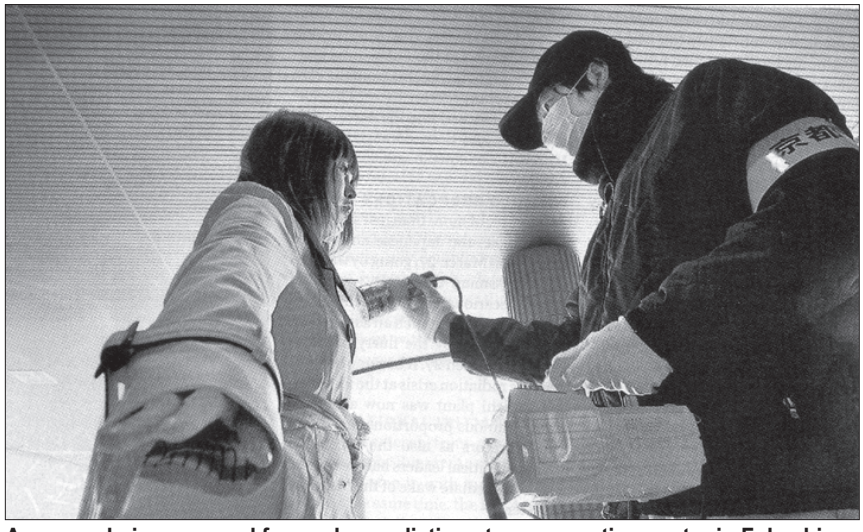
A police car stood at the entry point and ordered our car to stop. Officers explained politely but firmly that only government officials or the Tokyo Electric Power Company – operator of the Fukushima nuclear power plant – were permitted inside. We pulled the car aside and kept the engine running while scanning the area for a suitable site for the scientists to set up their monitoring equipment.

Rain had turned to snow. Inside the darkening car, our monitors had begun to climb – mine was showing an accumulated 325 microsieverts, the equivalent of almost one chest x-ray already.

Evacuation centres

The most excruciating experiences during our visit were in the two evacuation centres we visited.

Located in Tamura town, the first contained 800 local residents who were packed into a large gymnasium. It was not the tsunami, but the accident in the nuclear power plant they had tolerated for the past 40 years, that had devastated their lives.



A woman being scanned for nuclear radiation at an evacuation centre in Fukushima. 'There is a dire need for a real-time radiation monitoring network to be set up in areas affected' by the Fukushima disaster.

Cardboard linings demarcated tiny spaces for families. Old people covered in blankets lay in heaps off to one side.

Wanting to find out for myself, I deliberately avoided wearing the slippers given to guests who were asked to remove their shoes at the entrance. My feet froze almost instantly, reflecting the discomfort of the nuclear refugees who have lived on the cold and damp floor for weeks.

Portable toilets at the other refugee centre were situated outside the building, making visits during the freezing nights a nightmare for the elderly. A lone doctor at the centre described streams of patients seeking medical assistance. 'The authorities had promised us for years everything was safe. We do not believe them anymore,' she explained, declining to be photographed or identified. She hesitated to be overtly critical of their situation, preferring to focus her attention on the sick.

A protest in front of the headquarters of the Tokyo Electric Power Company, the Fukushima plant operator. As Japan struggles to contain the effects of the nuclear crisis, the public are calling for an alternative energy model.

Lessons learned

As Japan struggles to contain the world's second most catastrophic nuclear power accident, the public here are calling for an alternative energy model.

This marks the beginning of an unprecedented effort of the expanding network of scientists and designers in Japan – who are also reaching out for advice from their counterparts in the United States and Europe – to develop what some call the world's most comprehensive study on safety.

For now, though, Tao and his team are concentrating on negotiating their way into the tightly controlled bureaucratic systems here that have long resisted outside intervention – one of the more troubling aspects of Japan's economic development which now lies exposed by the disaster.

Returning to Tokyo, late at night, we wondered aloud what lessons Japan had learned from the disaster. We asked Tao what would come next. 'The answers will take time,' he said. 'More important right now is maintaining a collective effort to contain the nuclear tragedy that must involve both proponents and opponents of nuclear energy technology.'

After more than 20 years in Japan, I knew Tao and his community of concerned scientists were right. At a time of tragedy, Japanese wisdom had won. First things first, and only then can the right platform be established to debate the larger challenges. – *IPS* ◆

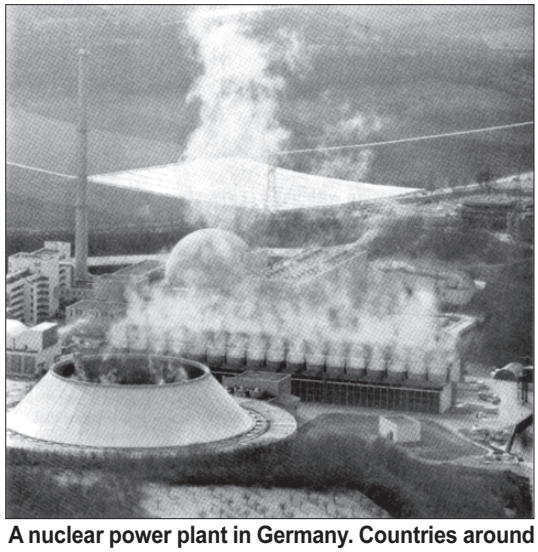
Fukushima nuclear crisis: Time to end the 'business as usual' syndrome

Fukushima is just one among many similar disasters waiting to happen worldwide; governments and regulators have systematically downplayed the risks and hidden the real costs of nuclear power. There is no place for nuclear in a truly green energy portfolio, and there is a lot we can do to put the nuclear genie back into the bottle, says *Dr Mae-Wan Ho*.

Nuclear safety in the spotlight

THE Fukushima disaster dominated a recent meeting in Vienna of signatories to the Convention on Nuclear Safety that was supposed to prevent a repeat of Three Mile Island and Chernobyl.

'I know you will agree with me that the crisis at Fukushima Daiichi has enormous implications for nuclear power and confronts all of us with a major challenge,' Yukiya Amano, head of the International Atomic Energy Agency (IAEA), told the participants. 'We cannot take a "business as usual" approach.'



A nuclear power plant in Germany. Countries around the world are rethinking their nuclear options, including Germany which has announced a three-month review of plans to continue operating its 17 nuclear plants.

It has been clear for some time now that the 'business as usual' approach is inadequate. A detailed assessment of nuclear accidents and malfunction carried out by Gordon Thompson of the Institute for Resource and Security Studies at the Massachusetts Institute of Technology revealed a litany of design faults in nuclear reactors that fail to protect the public adequately against accidents and malfunction due to human error, mechanical hitches, or external events such as tornadoes and earthquakes. In particular, there is no protection against malevolent or terrorist attacks. This applies to both existing nuclear reactors and 'Generation III' reactors in the pipeline or under construction. So in many ways, Fukushima was a disaster waiting to happen. But it is by no means alone.

In particular, Thompson condemned the calculation of risk in risk assessment (which applies to everything from nuclear power to genetically modified organisms), in which risk = hazard x probability. However big the hazard, it can be reduced to a very small acceptable risk if the probability is close to zero – such as a magnitude 9 earthquake followed by a giant tsunami.

Nuclear rethink

The Fukushima disaster has triggered a re-evaluation of nuclear energy programmes worldwide. Leak of water from the Canadian Pickering Nuclear Generating Station into Lake Ontario, five days after Fukushima, caused many Canadians to question the safety of nuclear power plants. In the United States, a *New York Times* editorial called for Americans to 'closely study' their own plans for coping with natural disasters. Mark Hibbs, a senior associate at the Carnegie Endowment's Nuclear Policy Program, said Fukushima was 'a wake-up call for anyone who believed that, after 50 years of nuclear power in this world, we have figured it out and can go back to business as usual.' Venezuelan President Hugo Chavez announced a freeze on all nuclear power development projects, including design of a nuclear power plant contracted with Russia. China froze nuclear plant approvals on 16 March.

The US Union of Concerned Scientists (UCS) reported 14 near-misses at US nuclear plants in the past year alone. The serious lapses included engineers accidentally switching off safety systems, electrical circuits failing and workers not knowing how to activate the system to summon emergency services. The UCS report released on 18 March came as President Barack Obama ordered a comprehensive review of the US' 104 active nuclear power plants. The report says the review is much needed, as the US Nuclear Regulatory Commission has a mixed safety record, catching some problems but overlooking others, or allowing them to be neglected.

UK Energy Secretary Chris Huhne said Britain may back away from nuclear energy because of safety fears and a potential rise in costs after the Fukushima disaster.

Countries around the world are reviewing their nuclear options. German Chancellor Angela Merkel announced a three-month review of plans to continue operating her country's 17 nuclear power plants. Switzerland suspended the approval process for three nuclear power plants, so safety standards can be reconsidered. And India has ordered safety inspections for all of its nuclear plants. Australia's Prime Minister Julia Gillard said her country has plenty of alternative sources of energy and does not need nuclear power.

The Japanese government has criticised Tokyo Electric Power Company (TEPCO), the owner of the Fukushima plant, for its handling of the nuclear disaster, including giving confusing radiation readings, and being slow to admit the seriousness of the situation and in its response. Many Japanese people no longer trust the company.

The WikiLeaks website released recent US embassy cables expressing unease over all the different nuclear power companies operating in Japan, of which TEPCO is the biggest. Taro Kono, a member of the Japanese parliament, told US diplomats that these firms were 'hiding the costs and safety problems associated with nuclear energy'. That is not news. A report several years ago found that TEPCO falsified nuclear safety data at least 200 times between 2000 and 2007.

The Japanese government has attempted to downplay the health hazard from the radiation leaks, as have governments and regulators worldwide. They have also been at pains to minimise the deaths from past nuclear disasters. The official number of deaths attributed to Chernobyl by the IAEA is 4,000. But senior Russian scientists documented deaths and illnesses at least 100 times more.

Fukushima the last nail in the coffin?

Fukushima should be the last nail in the coffin for the nuclear industry, as so much damning evidence has emerged indicating that it is extremely uneconomical and unsafe as well as highly unsustainable. Nuclear is not a renewable energy. In terms of savings in carbon emissions and energy, it is worse than a gas-fired electricity generating plant when available uranium ore falls below 0.02%, as it would in decades, just simply keeping up with existing nuclear facilities.

There are other repercussions.

Japan's nuclear disaster is toxic, not just for the environment – in the huge amounts of radioactive wastes spewed out into the atmosphere, deposited on land, leaked, and indeed flushed out into the sea – it is also toxic for TEPCO. The UK's *Guardian* newspaper reports the company facing a financial meltdown while its engineers are struggling to bring the nuclear meltdown under control. TEPCO's share price plummeted by 18% on 4 April to a 60-year low; the Japanese are losing faith in their nuclear industry.

TEPCO faces hefty costs for replacement power, construction of new generation capacity in place of damaged plants, and decommissioning at least four and possibly all six reactors at Fukushima Daiichi. It is also liable for compensation to local businesses and residents affected by the radiation leaks, and lawsuits are likely. An analyst at Bank of America Merrill Lynch estimated compensation charges of over £74 billion if the crisis continues for more than two years.

TEPCO is being propped up by the Bank of Japan and other big Japanese banks, and three major financial institutions are lending 1.9 trillion yen to deal with the crisis. Nevertheless, TEPCO's credit rating has been downgraded by Moody's and Standard & Poor's. Moody's said: 'TEPCO will remain highly leveraged and unprofitable for an extended period of time and will face substantial risk regarding nuclear liability.'

TEPCO's financing is so intricately bound up with the big banks that its demise will definitely send shivers throughout the world's financial markets already knee-deep in national debts and recession.

There is talk of nationalisation to prevent loss of confidence in the world markets.

Financial markets have already responded with sharp falls. The stock prices of many energy companies reliant on nuclear sources dropped, while the one silver lining in this unmitigated disaster is that renewable energy companies rose in value dramatically by 15 to 20%. It reaffirms the conclusions of a report by the Institute of Science in Society (ISIS) and Third World Network, *Green Energies: 100% Renewables by 2050,* that a wide variety of affordable and truly green energies – renewable, environmentally friendly, healthy, safe, non-polluting and sustainable – are already available for all nations to become energy self-sufficient and 100% renewable within decades. Policies and legisation that promote innovations and internal markets for decentralised, distributed small to micro-generation are the key.

ISIS has explicitly ruled out the nuclear option, with a recommendation that existing nuclear power stations should be decommissioned at the end of their designated lifetimes. Uranium mining should cease and clean-up should begin. At the same time, weapons-grade uranium should be consumed in existing reactors in accordance with nuclear disarmament. In addition, major public investment should be directed towards making safe toxic and radioactive nuclear wastes by means of low-energy nuclear transmutation[1], a new scientific development that is still being ignored by the mainstream. There is hope for putting the nuclear genie back into the bottle. ◆

Dr Mae-Wan Ho is Director and co-founder of the UK-based Institute of Science in Society (ISIS). The above is extracted from an article which appeared on the ISIS website (www.i-sis.org.uk).

Endnote

1. Ho MW, Cherry B, Burcher S and Saunders PT. *Green Emergies: 100% Renewables by 2050*, ISIS/TWN, London/Penang, 2009, Chapter 35. See also Ho MW. 'Transmutation, the alchemist dream come true', *Science in Society*, 36, 2007; and Larsen L. 'LENRs for nuclear waste disposal', *Science in Society*, 41, 2009.

The human and health costs of Chernobyl

While the full human impact of the Chernobyl disaster may never be fully known, the following article considers some of the estimates that are currently available.

Dirk Bannink

AT 0123 hrs on 26 April 1986, the fourth reactor of the Chernobyl nuclear power plant in Ukraine exploded.

The disaster was a unique industrial accident due to the scale of its social, economic and environmental impacts and longevity. It is estimated that, in Ukraine, Belarus and Russia alone, around nine million people were directly affected resulting from the fact that the long-lived radioactivity released was more than 200 times that of the atomic bombs dropped on Hiroshima and Nagasaki.

Across the former Soviet Union the contamination resulted in the evacuation of some 400,000 people. About 200,000 km^2 of land was, and is, contaminated by radioactive caesium-137 above 37,000 Bq/m^2 (intervention level). In area terms, about 3,900,000 km^2 of Europe was contaminated by caesium-137 (above 4,000 Bq/m^2), which is 40% of the surface area of Europe. Curiously, this latter figure does not appear to have been published and certainly has never reached the public's consciousness in Europe.

This contamination will persist for centuries, and many countries as well as Belarus, Ukraine and Russia will need to continue with food restriction orders for decades to come. The economic consequences of the accident remain a massive burden on the countries most affected; Ukraine and Belarus continue to spend a large percentage of their Gross National Product on trying to deal with the consequences of the accident.

About the health consequences of the Chernobyl accident, much research has been conducted, many reports have been written and still many uncertainties exist. Although official accounts point to 4,000 expected cancer deaths from Chernobyl in Belarus, Ukraine and Russia, the real prediction in International Atomic Energy Agency (IAEA)/World Health Organisation (WHO) reports is more than 9,000. Many other studies are expecting a multiple of that number. A 2009 publication that looked to Russian and Ukraine language reports, left out of the official studies, calculated a casualty figure of up to 900,000. The full impact of the Chernobyl disaster may never be known.

IAEA underestimates health consequences

In April 1996, the IAEA, together with WHO and the European Commission, organised the conference 'One Decade After Chernobyl: Summing Up the Consequences'. The conclusions of the IAEA on the health effects of the Chernobyl disaster were as follows:

• The death rate among 'liquidators'[1] did not exceed that for a corresponding age group.

• Thus far, the only admitted health effect due to radiation was an increase in thyroid cancers in children. Eight hundred and ninety cases were detected. In the coming decades, several thousand more cases of thyroid cancer (4,000-8,000) could be expected.

• No significant increase in leukaemia had been found.

• Future cancer deaths would be about 6,660: 2,200 among liquidators and 4,460 among residents and evacuees of contaminated areas.

• Other health effects were related to psychological stress: fear of radia-

'Chernobyl is safe' ... well, until 26 April 1986, that is

BEFORE the Chernobyl accident very little was known about the Chernobyl type reactor, the RBMK (also called the light-water-cooled, graphite-moderated reactor or LWGR). One of the few published articles on this before 1986, in the December 1983 issue of the German nuclear industry monthly *atomwirtschaft*, was written by H. Born from one of the main German utilities VEW. He wrote: 'For operational safety, the nuclear power plants (VVER and RBMK) are equipped with three parallel safety systems. The power plants are designed to withstand natural disasters (hurricanes, floods, earthquakes, etc.) and to withstand aircraft crash and blasts from outside. The safety is increased by the possibility in Russia of selecting a site far away from bigger towns.'

In the June 1983 issue of the *IAEA Bulletin*, B. Semenov, Deputy Director General, Head of the IAEA Department of Nuclear Energy and Safety, summed up 'many factors favouring the channel-type graphite-uranium boiling-water reactors' and concluded: 'The design feature of having more than 1,000 individual primary circuits increases the safety of the reactor system – a serious loss-of-coolant accident is practically impossible.' ◆

tion and a distrust in the government.[2]

The IAEA conclusions on Chernobyl's health effects were very conservative and were contradicted by other studies. The co-organiser of the 1996 conference, WHO, had presented completely different figures in the previous year. WHO, the UN Educational, Scientific and Cultural Organisation (UNESCO) and the UN Children's Fund (UNICEF) submitted their findings in a 1995 report to the UN General Assembly. WHO noted an increase in illnesses and deaths among liquidators. According to the Chernobyl Union (the union of liquidators), 10% of the liquidators had become less able-bodied and were unable to do full-time work.[3] The vice-adviser of Chernobyl affairs of the Ukrainian parliament, Wladimir Usatenko, said that according to federal registers, 60,000 of the 360,000 Ukrainian liquidators had died (not only due to Chernobyl). Another 49,000 had become less able-bodied and were unable to work.[4] The incidence of tumours among Belarussian liquidators was also higher than could normally be expected.[5]

The conclusion of the IAEA that the death rate among liquidators was not higher than normal and its silence on the high incidence of diseases indicated a lack of appreciation for the work they did. The IAEA denied that a significant increase in leukaemia among the liquidators had been found. But a study on a group of liquidators showed that five years after their work, cases of leukaemia reached a peak and subsequently decreased. The expected time between receiving a high dose of radiation and the development of leukaemia is five years. A relation therefore seems clear.[6]

Questionable

The IAEA's conclusion that other health problems were related to psychological stress is questionable. It is certainly true that liquidators and inhabitants of contaminated areas were fearful of the consequences of the disaster. This would contribute to the illnesses that already existed or that could be expected in the future. But to claim that all diseases other than thyroid cancer and leukaemia were caused by stress is pure nonsense. The rate of birth defects, for instance, showed a correlation with the amount of contamination. In highly affected areas, more birth defects had been diagnosed and the defects were worse in nature. In Belarus an increase of 161% had been recorded.[7] Sharp increases in diseases among children also belied the IAEA's 'psychological stress' claim. UNICEF statistics on the health conditions of Belarussian children from 1990 till 1994 showed an increase in different diseases or defects.[3]

It seems that the IAEA wanted to relate the increase in diseases mainly to psychological stress. Radiation would only be the cause of higher incidence of thyroid cancer and leukaemia. In this way, the number of deaths caused by radiation would be low. If the IAEA were to be believed, the other diseases/deaths were simply caused by stress.

The IAEA projections on future cancer deaths were also very low when one considers the dose to which the liquidators and inhabitants had been exposed. With the received collective dose, calculations can be made on the expected number of cancer deaths in the future. When these calculations were made with dose-effect figures from the official pro-nuclear International Commission on Radiological Protection (ICRP), a death total of 50,000 to 70,000 could be expected – only due to radiation exposure in the first two years after the accident.[8] The American radiation expert John Gofman made even more dramatic calculations. Because the ICRP dose-effect figures were too low, he made calculations with a figure for risk for received radiation six times higher. He calculated that 317,000 to 475,000 deaths could be expected worldwide.[8] The figure of 6,660 mentioned by the IAEA would certainly be too low.

IAEA study 'rubbish'

According to a September 2005 IAEA press release introducing the report 'Chernobyl's Legacy: Health, Environmental and Socio-Economic Impacts', a total of up to 4,000 people could eventually die of radiation exposure from the Chernobyl accident. '[A]s of mid-2005, however, fewer than 50 deaths had been directly attributed to radiation from the disaster.'

Chernobyl relief organisations and many radiation scientists disputed and criticised the data and figures in the report, calling them 'poor', 'quite inappropriate' or simply 'rubbish'. The report was accused of downplaying the true dimensions of the catastrophe. Some statements of the study were challenged as 'demonstrably false'. Experts were also concerned that the IAEA may have had 'too great an influence' on the study.

Dr Rosalie Bertell, a well-known expert, made many comments on the IAEA's press release. One of these comments was on the following quote: 'Approximately 1,000 on-site reactor staff and emergency workers were heavily exposed to high-level radiation on the first day of the accident; among the more than 200,000 emergency and recovery operation workers exposed during the period from 1986-1987, an estimated 2,200 radiation-caused deaths can be expected during their lifetime.' According to Bertell, 'Radiation-caused deaths is a loaded statement. It assumes that only death is considered to be detrimental, and eliminates the consideration of all severe and debilitating morbidity. Moreover, these scientists, trained by the documents released by the International Commission on Radiological Protection (ICRP) over the last 50 years, have accepted without question that the only health effects "of concern" attributable to radiation are deaths from cancer. Non-fatal cancers are basically of no concern. These are administrative decisions and not science...'

Dr Angelica Claussen from the German branch of the International Physicians for the Prevention of Nuclear War has remarked: 'Studies conducted for the International Chernobyl Project of the IAEA took place from January 1990 to the end of February

1991. In 1990 alone the rate of new cases of thyroid cancer in children in Belarus was 30 times higher than the 10 year average.'

The IAEA report stated however: 'The official data that were examined did not indicate a marked increase in the incidence of leukaemia or cancers ... Reported adverse health effects attributed to radiation were not substantiated either by those local studies that were adequately performed or by the studies under the Project ... The children who were examined were found to be generally healthy...'

Later independent research by the BBC has proved that the IAEA and its international commission of experts were already in possession of all the relevant facts at the time of the presentation of the report, including the histopathological evidence for a marked increase in the rate of thyroid cancers. It is alarming to ascertain that this deliberate deception of the general public was practised by such experts as Professor Mettler, director of the medical expert group of the International Chernobyl Project, and other experts from the European Union and Japan.

Human consequences of the Chernobyl accident

In a 2002 report entitled 'The Human Consequences of the Chernobyl Nuclear Accident', the UN called for an entirely new approach to helping the millions of people impacted by the Chernobyl accident, saying that 16 years after the incident those affected remained in a state of 'chronic dependency', with few opportunities and little control over their destinies. The UN warned that populations in Belarus, Russia and Ukraine would continue to experience general decline unless significant new measures were adopted to address health, environmental and unemployment issues.

The report set out the findings of a study carried out by an international panel of experts in July-August 2001. It was commissioned by the UN Development Programme (UNDP) and UNICEF, and was supported by WHO and the UN Office for the Coordination of Humanitarian Affairs (OCHA).

The study emphasised the need for the recovery phase to focus attention on two broad groups. The first group included some 100,000 to 200,000 people caught in the downward spiral. These were people who lived in severely contaminated areas; people who had been resettled but remained unemployed; and those whose health remained most directly threatened, including victims of thyroid cancer. Some 2,000 people had been diagnosed with thyroid cancer, and the report stated that as many as 8,000 to 10,000 additional cases were expected to develop over the coming years. The report stated that this group of up to 200,000 people, spread across all three countries, were 'at the core of the cluster of problems created by Chernobyl', and focusing on their needs and helping them take control of their futures must be a priority.

The second group identified for priority action included those whose lives had been directly and significantly affected but who were already in a position to support themselves. This group had found employment, but still must be reintegrated into society as a whole so that their ongoing needs could be addressed through the mainstream provision of services using criteria applicable to other members of society. This group included hundreds of thousands of individuals.

The report also identified a third group, encompassing millions of people, who had been indirectly impacted by the stigma, uncertainty and fatalism that had become associated with Chernobyl. This group, too, needed to be aided through clearer information and more open and continuous disclosures about the evolving situation in the region, the report argued. The report noted that some seven million people were in some way or another recipients of state welfare connected with Chernobyl.

Conclusion

Twenty-five years on, 26 April 2011 does not mark the end of the suffering resulting from the Chernobyl accident.

However, due to further downplaying of the health consequences by organisations linked to the nuclear establishment and the fact that the Chernobyl accident will fade away from public debate and in the collective memory, it will be extremely difficult to raise public awareness on this matter in the future.

Let's make sure that past and future suffering due to Chernobyl will not be in vain by making 26 April the international 'phase out nuclear' day and increasing our efforts to end the nuclear age. ◆

The above is an edited extract from a detailed chronology of the Chernobyl disaster which appeared in Nuclear Monitor *(No. 724, March 11, 2011).* Nuclear Monitor *is published by the World Information Service on Energy (WISE) and the Nuclear Information & Resource Service (NIRS).*

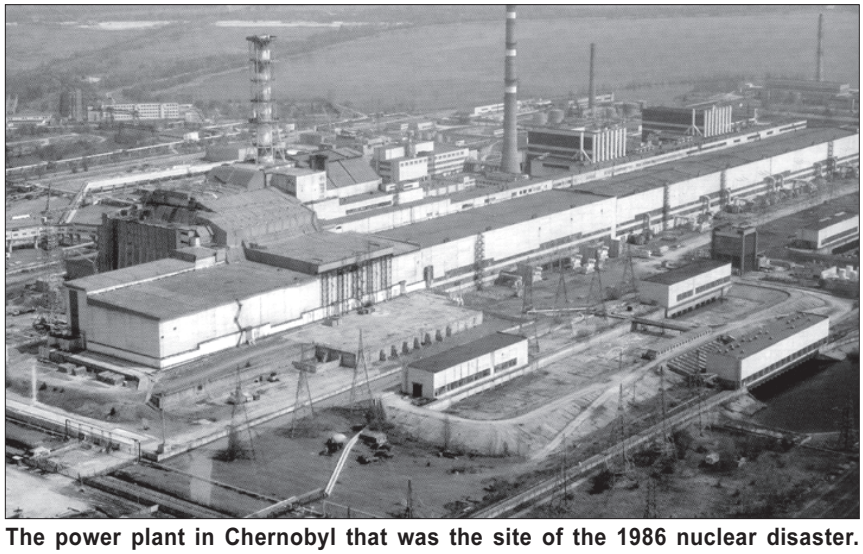
Endnotes

1. Hundreds of thousands of people, many of them military reservists, from all over the Soviet Union were mobilised to assist in the cleanup or the 'liquidation' of the consequences of the accident.
2. IAEA, 'One decade after Chernobyl: summing up the consequences of the accident. Conclusions', 1996.
3. UN, 'Strengthening of the coordination of humanitarian and disaster relief assistance ... regions', 1995.
4. Der Standard Online (Austria), 12 April 1996.
5. A Okeanov, Belarussian Centre for Medical Technologies, Minsk. 'The health status of the liquidators according to the Belarussian Chernobyl registry data (preliminary anakosis)', 1995.
6. Buzunov et al, 'Chernobyl NPP accident consequences cleaning up participants in Ukraine health status', March 1996.
7. G I Lazuik et al, 'Frequency changes of inherited anomalies in the Republic Belarus after the Chernobyl accident', 1995.
8. Greenpeace International, 'Chernobyl, 10 years after', *WISE News Communique* 451, 26 April 1996.

Chernobyl: Why WHO has failed to provide the lead in independent health assessment

The World Health Organisation's 1959 agreement with the International Atomic Energy Agency has fettered its independence in addressing the public health effects of a nuclear fallout, specifically in the case of the Chernobyl disaster.

Janette D Sherman



The power plant in Chernobyl that was the site of the 1986 nuclear disaster. International support for research on the consequences of Chernobyl must continue in order to mitigate the ongoing and increasing damage.

26 APRIL 2011 will mark the 25th anniversary of the Chernobyl catastrophe, and for more than 50 years, the World Health Organisation (WHO) and the International Atomic Energy Agency (IAEA) have abided by an agreement that, in essence, covers each other's back – sometimes at the expense of public health. It's a delicate balance between cooperation and collusion.

Signed on 28 May 1959 at the 12th World Health Assembly, the agreement states: 'Whenever either organisation proposes to initiate a programme or activity on a subject in which the other organisation has or may have a substantial interest, the first party shall consult the other with a view to adjusting the matter by mutual agreement.' It continues: '[The IAEA and WHO] recognise that they may find it necessary to apply certain limitations for the safeguarding of confidential information furnished to them. They therefore agree that nothing in this agreement shall be construed as requiring either of them to furnish such information as would, in the judgment of the party possessing the information, constitute a violation of the confidence of any of its Members or anyone from whom it has received such information or otherwise interfere with the orderly conduct of its operations.'

The WHO mandate is to look after the health of our planet, while the IAEA is to promote nuclear energy. In light of recent industrial failures involving nuclear power plants, many prominent scientists and public health officials have criticised WHO's non-competing relationship with the IAEA that has stymied efforts to address effects and disseminate information about the 1986 Chernobyl accident, so that current harm may be documented and future harm prevented.

On the 20th anniversary of Chernobyl, WHO and the IAEA published the *Chernobyl Forum Report*, mentioning only 350 sources, mainly from the English literature, while in reality there are more than 30,000 publications and up to 170,000 sources that address the consequences of Chernobyl.

After waiting two decades for the findings of Chernobyl to be recognised by the United Nations, three scientists, Alexey Yablokov from Russia, and Vasily Nesterenko and Alexey Nesterenko from Belarus, undertook the task of collecting, abstracting and translating some 5,000 articles reported by multiple scientists who observed first-hand the effects from the fallout. These had been published largely in Slavic languages and not previously available in translation. The result was *Chernobyl: Consequences of the Catastrophe for People and the Environment*, published by the New York Academy of Sciences in 2009.

The greatest amount of radioactivity fell outside of Belarus, Ukraine and European Russia, extending across the northern hemisphere as far away as Asia, North Africa, and North America, while the greatest concentrations continue to affect the 13 million living in Belarus, Ukraine, and European Russia.

Immediately after the catastrophe, release of information was limited, and there was a delay in collecting data. WHO, supported by governments worldwide, could have been proactive and led the way to provide readily accessible information, but

was not. These omissions resulted in several effects: limited monitoring of fallout levels, delays in getting stable potassium iodide to people, lack of care for many, and delay in prevention of contamination of the food supply.

The number of victims is one of the most contentious issues between scientists who collected data first-hand and WHO/IAEA that estimated only 9,000 deaths.

The most detailed estimate of additional deaths was done in Russia by comparing rates in six highly contaminated territories with overall Russian averages and with those of six less contaminated areas, maintaining similar geographical and socioeconomic parameters. There were over seven million people in each area, providing for robust analysis. Thus data from multiple scientists estimate the overall mortality from the Chernobyl catastrophe, for the period from April 1986 to the end of 2004, to be 985,000, a hundred times more than the WHO/IAEA estimate.

Copyright WHO/P. Virot

WHO headquarters in Geneva. WHO's relationship with the International Atomic Energy Agency has been criticised for stymieing efforts to address the effects of and disseminate information about Chernobyl.

File picture of evacuees from the Chernobyl area being tested for radiation exposure. The greatest concentrations of radioactivity continue to affect the 13 million living in Belarus, Ukraine and European Russia.

Given that thyroid diseases caused such a toll, Chernobyl has shown that nuclear societies – notably Japan, France, India, China, the United States, and Germany – must distribute stable potassium iodide (KI) *before* an accident, because it must be used within the first 24 hours.

Key to understanding effects from nuclear fallout is the difference between external and internal radiation. While external radiation, as from x-rays, neutron, gamma and cosmic rays, can harm and kill, internal radiation (alpha and beta particles), when absorbed by ingestion and inhalation, becomes embedded in tissues and releases damaging energy in direct contact with tissues and cells, often for the lifetime of the person, animal or plant.

To date, not every living system has been studied, but of those that have – animals, birds, fish, amphibians, invertebrates, insects, trees, plants, bacteria, viruses and humans – many with genetic instability across generations, all sustained changes, some permanent, and some fatal. Wild and domestic animals and birds developed abnormalities and diseases similar to those found in humans.

It takes 10 decades for an isotope to completely decay; thus, with their approximately 30-year half-lives, Sr-90 and Cs-137 will take nearly three centuries before they have decayed, a mere blink of the eye when compared to Pu-239 with a half-life of 24,100 years.

The human and economic costs are enormous: in the first 25 years the direct economic damage to Belarus, Ukraine, and Russia has exceeded $500 billion. Belarus spends about 20% of its national annual budget, Ukraine up to 6%, and Russia up to 1% to partially mitigate some of the consequences.

When a radiation release occurs we do not know in advance the part of the biosphere it will contaminate, the animals, plants, and people that will be affected, nor the amount or duration of harm. In many cases, damage is random, depending upon the health, age, and status of development and the amount, kind, and variety of radioactive contamination that reaches humans, animals and plants. For this reason, international support for research on the consequences of Chernobyl must continue in order to mitigate the ongoing and increasing damage. Access to information must be transparent and open to all, across all borders. WHO must assume independent responsibility in support of international health. ◆

Janette D Sherman, MD is the author of Life's Delicate Balance: Causes and Prevention of Breast Cancer *and* Chemical Exposure and Disease*, and is a specialist in internal medicine and toxicology. She edited the book* Chernobyl: Consequences of the Catastrophe for People and the Environment*, written by AV Yablokov, VB Nesterenko and AV Nesterenko, and published by the New York Academy of Sciences in 2009. Her primary interest is the prevention of illness through public education. She can be reached at: toxdoc.js@verizon.net and www.janettesherman.com. This article is reproduced from CounterPunch.org.*

How the 'peaceful atom' became a serial killer

The nuclear industry practises a snake-oil culture of habitual misrepresentation, pervasive wishful thinking, deep denial, and occasional outright deception, says *Chip Ward*.

WHEN nuclear reactors blow, the first thing that melts down is the truth. Just as in the Chernobyl catastrophe 25 years ago when Soviet authorities denied the extent of radiation and downplayed the dire situation that was spiralling out of control, Japanese authorities spent the first week of the Fukushima crisis issuing conflicting and confusing reports. We were told that radiation levels were up, then down, then up, but nobody aside from those Japanese bureaucrats could verify the levels and few trusted their accuracy. The situation is under control, they told us, but workers are being evacuated. There is no danger of contamination, but stay inside and seal your doors.

The first atomic snow job

The bureaucratisation of horror into bland and reassuring pronouncements was to be expected, especially from an industry where misinformation is the rule. Although you might suppose that the nuclear industry's outstanding characteristic would be its expertise, since it's loaded with junior Einsteins who grasp the math and physics required to master the most awesomely sophisticated technology humans have ever created, think again. Based on the record, its most outstanding characteristic is a fundamental dishonesty. I learned that the hard way as a grassroots activist organising opposition to a scheme hatched by a consortium of nuclear utilities to park thousands of tons of highly radioactive fuel rods, like the ones now burning at Fukushima, in my Utah backyard.

Here's what I took away from that experience: the nuclear industry is a snake-oil culture of habitual misrepresentation, pervasive wishful thinking, deep denial, and occasional outright deception. For more than 50 years, it has habitually lied about risks and costs while covering up every violation and failure it could. Whether or not its proponents and spokespeople are dishonest or merely deluded can be debated, but the outcome – dangerous misinformation and the meltdown of honest civic discourse – remains the same, as we once again see at Fukushima.

Established at the dawn of the nuclear age, the pattern of dissemblance had become a well-worn rut long before the Japanese reactors spun out of control. In the early 1950s, the disciples of nuclear power, or the 'peaceful atom' as it was then called, insisted that nuclear power would soon become so cheap and efficient that it would be offered to consumers for free. Visionaries that they were, they suggested that cities would be constructed with building materials impregnated with uranium so that snow removal would be unnecessary. Atomic bombs, they urged, should be used to carve out new coastal harbours for ships. In low doses, they swore, radiation was actually beneficial to one's health.

Such notions and outright fantasies, as well as propaganda for a new industry and a new way of war – even if laughable today – had tragic results back then. Thousands of American GIs, for instance, were marched into ground zero just after above-ground nuclear tests had been set off to observe their responses to what military planners assumed would be the atomic battlefield of the future. Ignorance, it turns out, is not bliss, and thousands of those soldiers later became ill. Many died young.

Unwary civilians who lived downwind of America's western testing grounds were also exposed to nuclear fallout and they, too, suffered horribly from a variety of cancers and other illnesses. Uranium miners exposed to radiation in the tunnels where they wrestled from the earth the raw materials for the nuclear age also became ill and died too soon, as did workers processing that uranium into weapons and fuel. Many of those miners were poor Navajos from my backyard in Utah where a new uranium boom, part of the so-called nuclear renaissance, was – before Fukushima – set to take shape.

How unlikely risks become inevitable

In the future, today's low-risk claims from industry advocates will undoubtedly seem as tragically naïve as yesterday's false claims. Yes, the likelihood that any specific nuclear power plant reactor will melt down may be slim indeed – which hardly means inconceivable – but to act as though nuclear risks are limited to the operation of power plants is misleading in the extreme. 'Spent fuel' from reactors (the kind burning in Japan as I write) is produced as a plant operates, and that fuel remains super hot and dangerous for hundreds, if not thousands, of years. As we are learning to our sorrow at the Fukushima complex, such used fuel is hardly 'spent'. In fact, it can be even more radioactive and dangerous than reactor cores.

Spent fuel continues to pile up in a nuclear waste stream that will have to be closely managed and monitored for eons, so long that those designing nuclear-waste repositories struggle with the problem of signage that might be intelligible in a future so distant today's languages may not be

understood. You might think that a danger virulent enough to outlast human languages would be a danger to avoid, but the hubris of the nuclear establishment is equal to its willingness to deceive.

A natural disaster, accident, or terrorist attack that might be statistically unlikely in any year or decade becomes ever more likely at the half-century, century, or half-millennium mark. Given enough time, in fact, the unlikely becomes almost inevitable. Even if you and I are not the victims of some future apocalyptic disturbance of that lethal residue, to consign our children, grandchildren, or great-grandchildren to such peril is plainly and profoundly immoral.

Nuclear proponents have long wanted to limit the discussion of risk to plant operation alone, not to the storage of dangerous wastes, and they remain eager to ignore altogether the risks inherent in transporting nuclear waste (often called 'mobile Chernobyl' by nuclear critics). Moving those spent fuel rods to future repositories represents a rarely acknowledged category of potential catastrophe. Just imagine a trainload of hot nuclear waste derailing catastrophically along a major urban corridor with the ensuing evacuations of nearby inhabitants. It means, in essence, that one of those Fukushima 'pools' of out-of-control waste could 'go nuclear' anywhere in our landscape.

Risk is about more than likelihood; it's also about impact. If I tell you that your chances of being bitten by a mosquito as you cross my yard are one in a hundred, you'll think of that risk differently than if I give you the same odds on a deadly pit viper. As events unfold in Japan, it's ever clearer that we're talking pit viper, not mosquito. You wouldn't know it though if you were to debate nuclear industry representatives, who consistently downplay both odds and impact, and dismiss those who claim otherwise as hysterical doomsayers. Fukushima will assumedly make their task somewhat more difficult.

Hidden costs and wasted subsidies

The true costs of nuclear power are another subject carefully fudged and obscured by nuclear power advocates. From its inception in federally funded labs, nuclear power has been highly subsidised. A recent report by the Union of Concerned Scientists found that 'more than 30 subsidies have supported every stage of the nuclear fuel cycle from uranium mining to long-term waste storage. Added together, these subsidies have often exceeded the average market price for the power produced.' When it comes to producing electricity, these subsidies are so extensive, the report concludes, that 'in some cases it would have cost taxpayers less to simply buy the kilowatts on the open market and give them away.'

If the nuclear club in Congress, led by Senate Republican leader Mitch McConnell, gets its way, billions more in subsidies will be forthcoming, including massive federal loan guarantees to build the next generation of nuclear plants. These are particularly important to the industry, since bankers won't otherwise touch projects that are notorious for mammoth cost overruns, lengthy delays, and abrupt cancellations.

The Obama administration has already proposed an additional $36 billion in such guarantees to underwrite new plant construction. That includes $4 billion for the construction of two new nuclear reactors on the Gulf Coast that are to be operated in partnership with Tokyo Electric Power Company – that's right, the very outfit that runs the Fukushima complex. Yet when I debate nuclear advocates, they always claim that, in cost terms, nuclear power outcompetes alternative sources of energy like wind and solar.

That government gravy train doesn't just stop at new power plants either. The feds have long assumed the epic costs of waste management and storage. If another multi-billion-dollar project like the now-abandoned Yucca Mountain repository in Nevada is built, it will be with dollars from taxpayers and captive ratepayers (the free market be damned). Industry spokesmen insist that subsidising such projects will be well worth it, since they will create thousands of new jobs. Unfortunately for them, a definitive 2009 University of Massachusetts study that analysed various infrastructure investments including wind, solar, and retrofitting buildings to conserve energy placed nuclear dead last in job creation.

Finally, the recently renewed Price-Anderson Nuclear Industries Indemnity Act limits the liability of nuclear utilities should a catastrophe like the one in Japan happen here in the United States. The costs of recovery from the Fukushima catastrophe will be astronomical. In the US, nuclear utilities would be off the hook for any of those costs and you, the citizen, would foot the bill. Despite their assurances that nothing can go wrong here, nuclear industry officials have made sure that in their business risk and reward are carefully separated. It's a scenario we should all know well: private corporations take away profits when things go well, and taxpayers assume responsibility when shit happens.

Finally, nuclear power boosters like to proclaim themselves 'green' and to claim that their industry is the ideal antidote to global warming since it produces no greenhouse gas emissions. In doing so, they hide the real environmental footprint of nuclear energy.

It's quite true that no carbon dioxide comes out of power-plant smokestacks. However, maintaining any future infrastructure to handle the industry's toxic waste is guaranteed to produce lots of carbon dioxide. So does mining uranium and processing it into fuel rods, building massive reactors from concrete and steel, and then behemoth repositories capable of holding waste for 1,000 years. Radiation from the Fukushima meltdown is now entering the Japanese food chain. How green is that?

The watchdogs play dead

Over the course of nuclear power's history, there have been scores of mishaps, accidents, violations, and problems that, chances are, you've never heard about. Beyond the unavoidable bad PR over the partial meltdown at Three Mile Island in 1979, the Chernobyl meltdown in 1986, and now the Japanese catastrophe, the industry has an excellent record – of covering up its failures.

In the US, the co-dependent relationship between the nuclear corporations and the Nuclear Regulatory Commission (NRC), the federal agency charged with licensing and monitoring them, resembles the cosy relationship between the Securities Exchange Commission and Wall Street before the global economic meltdown of 2008. The NRC relies heavily on the industry's own reports since only a small fraction of its activities can be inspected yearly.

A report by the Union of Concerned Scientists, 'The NRC and Nuclear Power Plant Safety in 2010', which highlights the NRC's haphazard record of inspection and enforcement, makes clear just why the honour system that assumes utilities will honestly report problems has never worked. It describes 14 recent serious 'near miss' violations that initially went unreported. At the Indian Point Nuclear Power Plant, only 38 miles north of the New York metropolitan area, for instance, NRC inspectors ignored a leaking water containment system for 15 years.

After a leaking roof forced the shutdown of two reactors at the Calvert Cliffs nuclear facility in Maryland, plant managers admitted that it had been leaking for eight years. When Honeywell hired temporary workers to replace striking union members at its uranium refinery in Illinois, they were slipped the correct answers to a test required for those allowed to work at nuclear plants, because otherwise they had neither the knowledge nor experience to pass.

The regulation of Japan's nuclear industry mirrors the American model. Japan's legacy of regulatory scandals, falsified safety records, underestimated risks, and cover-ups includes an incident in 1999 when workers mixed uranium in open buckets and exposed hundreds of co-workers to radiation. Two later died. Other scandals involved hiding cracks in steam pipes from regulators in 1989, lying about a fire and explosion at a plant near Tokyo in 1997, and covering up damage to a plant from an earthquake in 2007.

In the wake of the Fukushima catastrophe, we will no doubt discover how there, too, so-called watchdogs rolled over and played dead. In recent years, in fact, the Fukushima complex had the highest accident rate of any of the big Japanese nuclear plants. We've already learned that an engineer who helped design and supervise the construction of the steel pressure vessel that holds the melting fuel rods in Reactor No. 4 warned that it was damaged during production. He had himself initially orchestrated a cover-up of this fact, but revealed it a decade later – only to be ignored. During the complex's construction by General Electric some 35 years ago, Dale Bridenbaugh, a GE employee, resigned after becoming convinced that the reactors being built were seriously flawed. He, too, was ignored. The Vermont Yankee reactor in Vermont and 23 others around the US replicate that design.

Stay tuned, since more examples of reckless management will surely come to light...

Risk is not a math problem

That culture of secrecy is a logical fit for an industry that is authoritarian by nature. Unlike solar or wind power, nuclear power requires massive investments of capital, highly specialised expertise, robust security, and centralised control. Any local citizen facing the impact of a uranium mine, a power plant, or a proposed waste depository will attest that the owners, operators, and regulators of the industry are remote, unresponsive, and inaccessible. They misinform because they have the power to get away with it. The absence of meaningful checks and balances enables them.

Risk, anti-nuclear advocates quickly learn, is not simply some complicated math problem to be resolved by experts. Risk is, above all, a question of who is put at risk for whose benefit, of how the rewards, costs, and liabilities of an activity are distributed and whether that distribution is fair. Those are political questions that citizens directly affected should be answering for themselves. When it comes to nuclear power, that doesn't happen because the industry is undemocratic to its core. Corporate officers treat downwind stakeholders with the same contempt they reserve for honest accountings of the industry's costs and dangers.

It may be difficult for the average citizen to unpack the technicalities of nuclear power, or understand the complex physics and engineering involved in splitting atoms to make steam to produce electricity. But most of us are good at detecting bullshit. We know when something like the nuclear industry doesn't pass the smell test.

There is a growing realisation that our carbon-based energy system is warming and endangering this planet, but replacing coal and oil with nuclear power is like trading heroin for crack – different addictions, but no less unhealthy or risky. The 'nuclear renaissance', like the 'peaceful atom' before it, is the energy equivalent of a three-card monte game, involving the same capitalist crooks who gave us oil spills, bank bailouts, and so many of the other rip-offs and scams that have plagued our lives in this new century.

They are serial killers. Stop them before they kill again. Credibility counts and you don't need a PhD or a Geiger counter to detect it. ◆

Chip Ward was a founder of HEAL Utah, a grassroots group that has led the opposition to the disposal of nuclear waste in Utah and the construction of a new reactor next to Green River. He is the author of Canaries on the Rim: Living Downwind in the West *and* Hope's Horizon: Three Visions for Healing the American Land. *This article is reproduced from TomDispatch.com.*

End nuclear power before it ends us

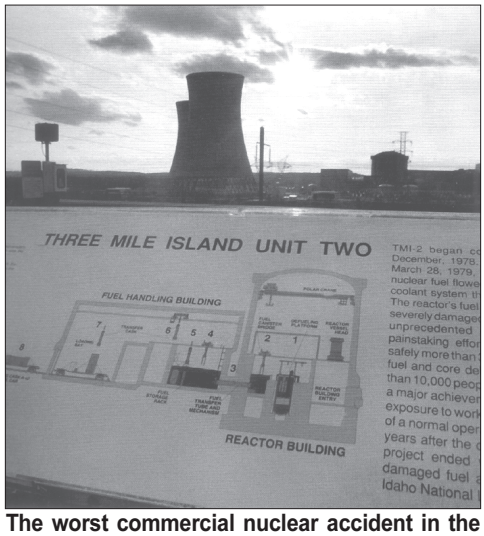
We are all obliged – for all our sakes – to make sure that the disaster that is happening in Fukushima never occurs again, says *Harvey Wasserman*.

THE Japanese people are now paying a horrific price for the impossible dream of the 'peaceful atom'. For a half-century they have been told that what's happening now at Fukushima would never occur.

Our hearts and souls must first and foremost go out to them. As fellow humans, we must do everything in our power to ease their wounds, their terrible losses and their unimaginable grief.

We are also obliged – for all our sakes – to make sure this never happens again.

In 1980, I reported from central Pennsylvania on what happened to people there after the accident at Three Mile Island a year before. I interviewed scores of conservative middle Americans who were suffering and dying from a wide range of radiation-related diseases. Lives and families were destroyed in an awful plague of unimaginable cruelty. The phrase 'no one died at Three Mile Island' is one of the worst lies human beings have ever told.



The worst commercial nuclear accident in the US occurred in 1979 in the Unit Two reactor of the Three Mile Island nuclear power plant in Pennsylvania.

In 1996, 10 years after Chernobyl, I attended a conference in Kiev commemorating the 10th anniversary of that disaster. Now, another 15 years later, a definitive study has been published indicating a death toll as high as 985,000...so far.

Today a disaster with no end in sight is raging in Fukushima. The workers at the site are incomparably brave. They remind us, tragically, of some 800,000 Chernobyl 'liquidators'. These were Soviet draftees who were sent into that seething ruin for 60 or 90 seconds each to quickly perform some menial task and then run out.

When I first read that number – 800,000 – I thought it was a typographical error. But after attending that 1996 conference in Kiev, I spoke in the Russian city of Kaliningrad and met with dozens of these Chernobyl veterans. They tearfully assured me it was accurate. They were angry beyond all measure. They had been promised they would not encounter health problems. But now they were dying in droves.

How many will die at Fukushima we will never know. Never have we faced the prospect of multiple meltdowns, four or more, each with its own potential for gargantuan emissions beyond measure.

If this were happening at just one reactor, it would be cause for worldwide alarm.

One of the units has been powered by Mixed Oxide Fuel. This MOX brew has been heralded as a 'swords into ploughshares' breakthrough. It took radioactive materials from old nuclear bombs and turned them into 'peaceful' fuel.

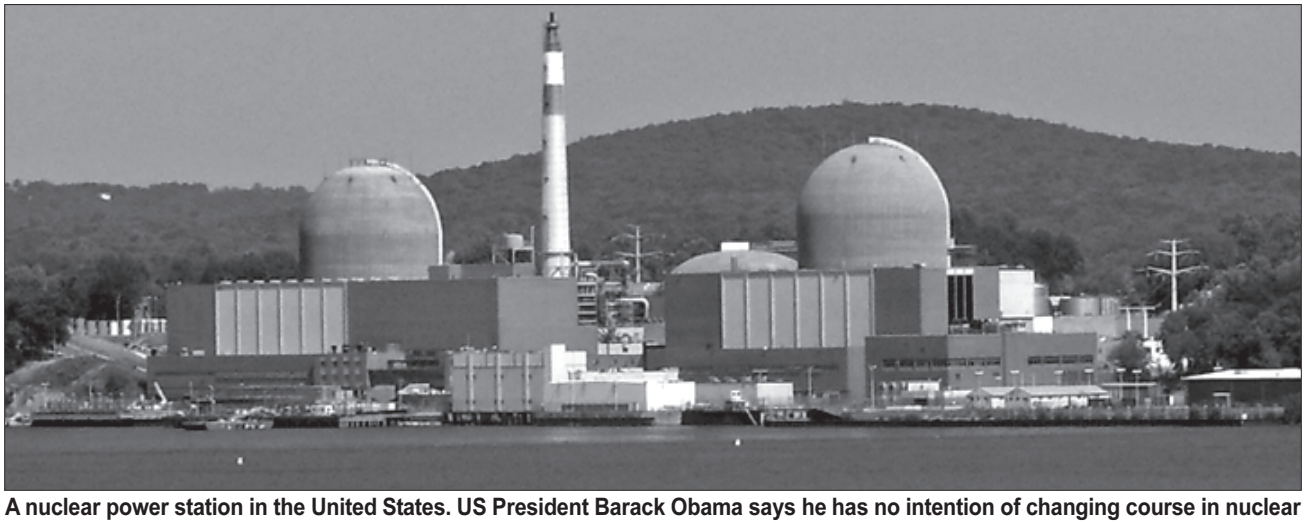
It seemed like a neat idea. The benefits to the industry's image were obvious. But they were warned repeatedly that this would introduce plutonium into the burn chain, with a wide range of serious repercussions. Among them was the fact that an accident would spew the deadliest substance ever known into the atmosphere. If breathed in, the tiniest unseen, untasted particle of plutonium can cause a lethal case of lung cancer. But as with so many other warnings, the industry ignored its grassroots critics. Now we all pay the price.

US policy

For 25 years the nuclear industry has told us Chernobyl wasn't relevant because it was Soviet technology. Such an accident 'could not happen here'. But today it's the Japanese. If anything, they are better at operating nuclear reactors than the Americans. Japanese companies own the Westinghouse nuclear division, whose basic design is in place throughout France. Japanese companies also own the GE nuclear division. Among others, 23 of their US reactors are extremely close or virtually identical in design to Fukushima I, now on fire.

Jeffrey Immelt, head of GE, is one of the many heavy corporate hitters now advising Barack Obama. Obama says (so far) that he has no intention of changing course in nuclear policy. That apparently includes a $36 billion new reactor loan guarantee giveaway in the 2012 budget. Energy Secretary Steven Chu has made clear he considers the situation at US reactors very different from those in Japan. Essentially, he says, 'it can't happen here'.

Chu and others keep saying that our choice is between nukes and coal, that atomic energy somehow miti-



A nuclear power station in the United States. US President Barack Obama says he has no intention of changing course in nuclear policy.

gates global warming. This is an important sticking point for millions of concerned citizens, and an important and righteous legion of great activists, who see climate chaos as the ultimate threat.

But especially in light of what's happening now, it's based on a non-choice. Nukes are slow to build, soaring in cost and clearly have their own emissions, waste and safety problems. The ancillary costs of coal and oil are soaring out of reach in terms of environmental, health and other negative economic impacts. The 'bridging fuel' of gas also faces ever-higher hurdles, especially when it comes to fracking and other unsustainable extraction technologies.

The real choice we face is between all fossil and nuclear fuels, which must be done away with, as opposed to a true green mix of clean alternatives. These safe, sustainable technologies now, in fact, occupy the mainstream. By all serious calculation, solar is demonstrably cheaper, cleaner, quicker to build and infinitely safer than nukes. Wind, tidal, ocean thermal, geothermal, wave, sustainable biofuels (NOT from corn or soy), increased efficiency, revived mass transit all have their drawbacks here and there. But as a carefully engineered whole, they promise the balanced Solartopian supply we need to move into a future that can be both prosperous and appropriate to our survival on this planet.

On the brink

As we see now all too clearly, atomic technology is at war with our Earth's ecosystems. Its centralised, heavily capitalised corporate nature puts democracy itself on the brink. In the long run, it contradicts the human imperative to survive.

Today we have four reactors on the coast of California that could easily have been ripped apart by a 9.0 Richter earthquake. Had this last seismic hit been taken on this side of the Pacific, we would be watching nightly reports about the horrific death toll in San Luis Obispo, the catastrophic loss of the irreplaceable food supply from the Central Valley, and learned calculations about the forced evacuations of Los Angeles and San Diego.

There are nearly 450 atomic reactors worldwide. There are 104 here in the US.

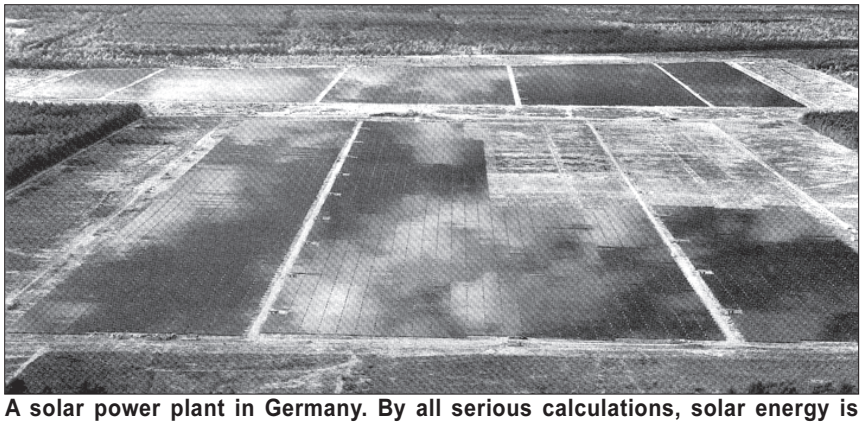
Faced with enormous public demonstrations, the Chancellor of Germany has ordered their older reactors shut. At the very least this administration should follow suit.

The Chinese and Indians, the biggest potential buyers of new reactors, are said to be 'rethinking' their energy choices.

As a species, we are crying in agony, to the depths of our souls, from compassion and from fear.

But above all, the most devastating thing about the catastrophe at Fukushima is not what's happening there now.

It's that until all the world's reactors are shut, even worse is virtually certain to happen again. All too soon. ◆



A solar power plant in Germany. By all serious calculations, solar energy is demonstrably cheaper, cleaner and infinitely safer than nuclear power.

Harvey Wasserman edits the NukeFree.org website. He is Senior Editor of Freepress.org and author of SOLARTOPIA! Our Green-Powered Earth. *This piece appeared on Freepress.org and the Buzzflash/Truthout website.*

No more Chernobyl, no Fukushima: No to nuclear energy worldwide!

Reacting to the Fukushima tragedy, more than 35 national and international civil society organisations and individuals have issued the following call to end reliance on nuclear power.

THE tragedy in Japan has aroused worldwide solidarity due to the loss of thousands of human lives and of vast regions and cities caused by the magnitude 9 earthquake and subsequent tsunami that devastated major parts of Japanese territory. The undersigned networks, organisations, and individuals wish to first express our deepest condolences to the Japanese people and make known our shared grief and sympathy for the humanitarian emergency caused by this disaster.

Meanwhile, we find extremely worrying the impact of the natural disaster on the Fukushima Nuclear Power Station, causing explosions and leading to serious risks due to the release of radioactive material, a situation that may worsen if the elements of this plant are fused by overheating. Two more nuclear plants are also at risk in Onagawa and Tokai. The Japanese government has been forced to shut down at least 11 nuclear plants in order to prevent further disaster, leaving more than 6 million people without electricity. Some 200,000 people have been evacuated to avoid possible exposure to the harmful effects of a nuclear accident, and public health measures are being taken for the exposed population. The nuclear damage and risk show how unjust this system is; the Fukushima plant is to supply the metropolitan area with electricity but residents near the plant have suffered its risks the most, meanwhile profit-making enterprises promote the exportation of nuclear power-generating plants as 'clean energy'.

This tragic situation alerts us ONCE MORE to the enormous danger nuclear plants pose to the survival and security of the world, and reminds us of the resistance of those Japanese activists who refused to build the plants 40 years ago. Today the world is changing not only because of the threat of natural disasters but also due to climate change, which has produced major flooding, landslides and severe changes in the habitability of the planet, such as recent mudslides in Rio de Janeiro that threatened nuclear plants in the area and caused them to be stopped until the situation stabilises. This global vulnerability requires much reflection, but above all, an awareness of the fact that technology and money will not save lives once tragedies occur.

The use of nuclear power for energy supply, and worse, for the purposes of war, must stop.

The climate crisis and the demand for energy have led large corporations and developed countries to discuss nuclear energy as a clean and sustainable alternative energy. The World Bank's own energy programmes consider nuclear power, along with large hydroelectric dams, to be an important possibility. But it is increasingly clear that these are false solutions that only increase danger and the vulnerability of humanity in the face of global changes.

Nuclear energy is being proposed as an alternative, 'clean' source of energy in climate change negotiations, but it has repeatedly proven capable of escaping both technical and human control and affecting millions of people, particularly future generations, with potential adverse effects on life. The same danger is related to the treatment of toxic waste that contaminates our planet. Multilateral forums such as the Rio+20 process, the UN Climate Convention, and forums related to alternative energy should take seriously the dangers of nuclear energy. We urge governments to listen to their peoples and to the voices of civil society around the world that express opposition to the false solutions. We call on governments to focus on ensuring the survival of millions of people around the world and their right to shelter, health, and food sovereignty, instead of weakening conditions on the planet by following the dictates of capital.

We demand a move toward decommissioning nuclear plants throughout the world, and a search for real solutions for the people, and ask that every precaution be taken to avoid regrettable damage. Chernobyl and Fukushima are warnings that should compel governments to stop insisting on continuing to promote these projects. The use of nuclear power for energy supply, and worse, for the purposes of war, must stop.

Business does not interest us, what interests us is the life and safety of the population without increasing their vulnerability.

FUKUSHIMA AND CHERNOBYL ARE ENOUGH! NO MORE NUCLEAR ENERGY! ◆

Silence shrouds new Egyptian security agency

Among the major achievements of the revolt in Egypt was the abolition of the hated State Security Investigations (SSI) apparatus. But a lack of information about the role and powers of its successor body has led to concern as to whether it will turn out to be a scaled-down version of the old repressive apparatus.

Adam Morrow and Khaled Moussa Al-Omrani

IN mid-March, Egypt's transitional government formally dissolved the hated State Security Investigations (SSI) apparatus, meeting a longstanding demand of the opposition. But in the month since, authorities have remained tight-lipped about the SSI's planned successor agency, raising fears that the transformation will be in name only.

'There has been an inexcusable lack of information until now about the new security agency's precise role and activities,' Amr Hashim Rabie, expert in political affairs at the Cairo-based Al-Ahram Centre for Political and Strategic Studies, told Inter Press Service (IPS).

On 15 March, Egypt's newly appointed interior minister Major-General Mansour al-Essawy formally announced the dismantlement of the SSI. The minister, an official spokesman declared, 'has decided to disband the SSI, including all of the agency's various administrations, branches and offices'.

The spokesman went on to say that al-Essawy had also decreed the establishment of a new security apparatus, to be known as the National Security Bureau (NSB). The role of the new agency, he noted, would be limited to 'safeguarding national security and coordinating with state agencies to protect the domestic front and combat terrorism'.

The NSB, the spokesman added, would operate 'in conformity with the constitution, the law and principles of human rights'. It would not, he stressed, 'trespass on the everyday lives of citizens or violate their political rights'.

Five days later, the interior ministry named Major-General Hamid Abdullah the new agency's first director. A police academy graduate, Abdullah had formerly served as security director for Egypt's Helwan province before becoming assistant interior minister for the northern sector of Upper Egypt.

Chief demand

The abolition of the SSI had represented a chief demand of leaders of Egypt's recent 25 January Revolution, which ultimately led to the 11 February ouster of longstanding president Hosni Mubarak. Since Mubarak's removal, the nation's affairs have been run by Egypt's Supreme Council of the Armed Forces, which appointed al-Essawy in early March.

Over the course of Mubarak's 30-year rule, the SSI had been frequently accused of committing the worst kinds of human rights abuses.

Over the course of Mubarak's 30-year rule, the SSI had been frequently accused of committing the worst kinds of human rights abuses. According to its critics, the SSI's chief function had been to protect the ruling regime, suppressing dissent by torturing – even murdering in some cases – regime opponents and critics.

The SSI had also been known for closely monitoring political dissidents and for playing a role in the rigging of national elections in favour of Mubarak's ruling National Democratic Party. In the first two weeks of March, SSI offices in several Egyptian provinces were stormed by protesters who attempted to save potentially incriminating documents from destruction.

In the immediate wake of the revolution, information emerged strongly suggesting that the SSI had even played a role in the bombing of a church in Alexandria last New Year's Eve in which 24 people were killed. At the time, regime officials had duplicitously blamed the attack first on 'Al-Qaeda' then later on Palestinian Islamist groups.

Several high-ranking SSI officers – along with former interior minister Habib al-Adli and Mubarak himself – are currently under arrest. They all face charges of, among other things, using lethal force against protesters during the 18-day uprising.

Lack of clarity

Regime critics and opposition figures initially hailed the SSI's dissolution. But the subsequent lack of information regarding the NSB has now raised concerns that the new agency could end up playing the same repressive role as its predecessor.

'Official statements concerning the new agency have been very brief and entirely lacking in details,' Bahy Eddin Hassan, director of the Cairo Centre for Human Rights Studies, told IPS. 'This has led to serious concern on the part of both political figures and the wider public that the NSB will

amount to little more than a scaled-down version of the SSI.'

'If the ruling transitional government wants to reassure critics that the SSI has truly been done away with, it must clarify exactly how the new agency plans to operate,' he added.

When Hassan contacted the interior ministry in hopes of obtaining such clarification, he was told by officials that the particulars of the NSB's role and activities were still 'under discussion'.

On 12 April, the state press reported that 75% of the officers formerly associated with the SSI – namely, those who had been involved in monitoring dissidents – had been transferred to entirely separate state administrations, such as emergency services and local fire departments. The remaining 25%, meanwhile – who were untainted by any previous connection with political affairs – would continue to work within the new NSB.

'This is a positive step, but it isn't enough to simply change individual officers; there must be a total transformation of the agency's modus operandi,' said Rabie. 'We have to be assured that the new agency will not end up using the same methods and techniques as those employed by the dissolved SSI.'

'Specifically, the new agency's role should be limited to combating terrorism and espionage – not monitoring activists, journalists and students,' he added. 'This requires effective judicial oversight over all of the NSB's operations so as to ensure these are carried out within a legal and transparent context.'

Egypt's SSI, originally dubbed the 'Special Department', was first established in 1913 during the British occupation, with the express aim of keeping tabs on political dissent. Following the 1952 Revolution, President Gamal Abdel Nasser did away with most elements of the colonial administration, but kept the Special Department intact. The agency was renamed the SSI in the 1970s during the presidency of Anwar Sadat. – *IPS* ◆

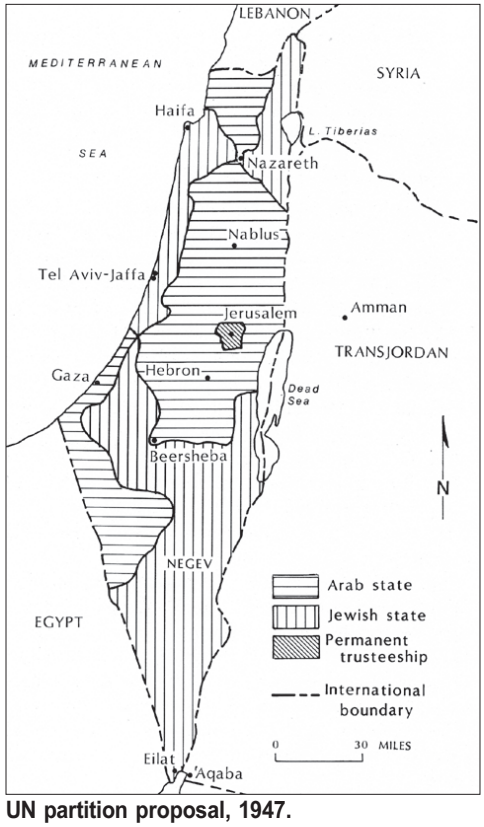
Israel unwilling to apply the same law to itself that it demands be applied to others

Israel has reacted to recent moves by Latin American countries to recognise a Palestinian state by charging that this act is illegal and even 'anti-Semitic'. *Ian Williams*, a longtime journalist based in the UN, comments.

'O WAD some Power the giftie gie us/To see oursels as ithers see us!' wrote Robert Burns, Scotland's national poet. For those who need a translation, he prays for the gift of seeing ourselves as others see us after seeing a louse crawl out of a young lady's hair in church.

Observers of the Middle East have long noticed Israeli insouciance to the lice swarming in that country's head.

According to the commentary from pro-Israel government sources, it is unthinkable, provocative and anti-Semitic for states like almost the whole of Latin America to recognise Palestine – until they do, of course, in which case it immediately becomes a futile and wasted gesture. Israeli *hasbara* (propaganda) is indeed capable of believing three impossible, and contradictory, things before breakfast. Fortunately, Israel is not trying to agitate an American attack on Latin America, so countries there have some leeway.



UN partition proposal, 1947.

In particular, the polemics from some Israeli think-tanks against the idea of the UN recognising a Palestinian state would surely benefit from Jehovah's largesse in this matter.

Alan Baker of the Jerusalem Center for Public Affairs, for example, solemnly intoned for the benefit of foreign diplomats and press that the recognition of a Palestinian state was illegal 'as set out in the 1933 Montevideo Convention on the Rights and Duties of States, relating to a capability of governance, permanent population, defined territory, and capacity to enter into relations with other states'. From 1985-89, before becoming Israel's ambassador to Canada, Baker was seconded by the Israeli government to the UN's Department of Legal Affairs, where he seems to have survived despite his interpretation of international law being so notably at variance with that of everyone but Israel and its supporters.

Nothwithstanding his insistence on 'permanent population, defined territory, and capacity to enter into relations with other states' for Palestinian recognition, Baker's time at the UN clearly was not spent in the archives. When Israel was admitted to the world body in 1949, if it had any recognised frontier at all it was the boundaries of the Jewish state demarcated by the commission that recommended partition, and explicitly excluded both parts of Jerusalem. This is why, of course, not one single member state now has an embassy to Israel in that city.

Israel's admission was delayed until the conclusion of armistice agreements with its neighbours, which came at a heavy cost: the assassination of UN representative Count Folke Bernadotte by the party led by Yitzhak Shamir, which now, of course, rules Israel.

And that state at the time had a temporarily permanent population that included a majority of Arabs, but a much less permanent population of outsiders who were deemed to be automatic citizens. It is a little too late to call for nullification of Israel's accession to the UN, although perhaps less tardy to remind the state of the promises it made on that accession to abide by UN decisions.

Baker also solemnly said that any attempt to secure recognition of Palestine was a violation of Palestinian commitments under the Oslo agreements. Of course, one would have to look hard in the Oslo agreements to see where they countenanced repeated Israeli military incursions into the West Bank and Gaza, assassinations and arrests of elected Palestinian Authority officials, blockading Gaza, and blowing up UN facilities.

And with hallmark chutzpah he solemnly accused the Palestinians of violating undertakings under 'Article

XXXI, para. 7, not to initiate or take any step that will change the status of the West Bank and the Gaza Strip pending the outcome of the permanent status negotiations'. Unlike, of course, doubling the settler population since the agreements were signed. Indeed, so damning was a recent European Union report on Israeli activities that European foreign ministers vetoed its publication – fruitlessly in the age of WikiLeaks since *The Independent* newspaper in Britain promptly leaked it. The report accused Israel of 'restrictive zoning and planning, ongoing demolitions and evictions, an inequitable education policy, difficult access to health care, the inadequate provision of resources and investment', policies which it concluded had a demographic intent.

Describing the political consequences of Israeli policy in Jerusalem, the document added: 'Over the past few years the changes to the city have run counter to the peace process. Attempts to exclusively emphasise the Jewish identity of the city threaten its religious diversity and radicalise the conflict, with potential regional and global repercussions.'

In the face of this accurately depicted reality, Baker's breathtaking audacity, indeed mendacity, should be beyond satire. But across the world, some politicians, headline-writers and letter-writers will repeat it – and do so sincerely. After all, if one's worldview is that Israel is never wrong, then clearly reality must be ignored or adjusted accordingly.

In fact, it has been some years since I pointed out that the status of Jerusalem can indeed be negotiated between the parties – but that their agreement has no validity until and unless the UN rescinds that partition resolution which made Jerusalem an international city under UN jurisdiction. It is indeed unfair and anomalous that the world's diplomats, by refusing to base embassies in Jerusalem, respect the residual authority of that resolution over the city, but forget the only legally sanctioned boundary between the Jewish and Arab states.

Baker invoked Brazil's words in the UN Security Council in 1967 to decry the Latin American states' recognition of Palestine 'within the 1967 boundaries'. He quotes them as saying, 'Its acceptance does not imply that borderlines cannot be rectified as a result of an agreement freely concluded among the interested States. We keep constantly in mind that a just and lasting peace in the Middle East has necessarily to be based on secure permanent boundaries freely agreed upon and negotiated by the neighbouring States.'

Indeed, the pre-1967 boundaries were armistice lines without permanent legal foundation, and the Latin Americans, like the Palestinians, often invoke international law, since it is one of their defences against neighbouring bullies, notably the US. Everyone agrees that the 1967 boundaries are negotiable – but international law and the UN Charter also outlaw the acquisition of territory by force, which is why not one single country in the world has recognised Israel's annexation of East Jerusalem, its legal title to the West Bank and Gaza, or even the Golan Heights.

But there is no rule saying Israel is entitled to keep the 1967 boundaries and then add more territory. Indeed, the Palestinians would be legally and morally justified (albeit at the risk of some questioning of their grip on reality) in demanding in negotiations a return to the original UN partition lines of 1947.

The Lake of Tiberias Strip

Also, to return to a theme the Palestinians seem to have forgotten, while the Golan Heights are indisputably occupied Syrian territory, the strip along the Lake of Tiberias is, under the Mandate boundaries, equally indisputably occupied Palestinian territory. The British and French had drawn up the boundaries and left a 10-metre strip – the beach, effectively – as part of Palestine to ensure what was then British control of the lake and the headwaters of the Jordan.

That strip was indeed allocated to the Jewish state in the UN partition plan, but one suspects that the Israelis would not be eager to cite that plan as definitive on the boundary front, since it would imply that their boundaries would shrink way behind the 1949 Armistice Line. In fact, to the south of Lake Tiberias the Syrians controlled more extensive Palestinian territory that was later designated a demilitarised zone. The Israel Defence Forces continually encroached on it, of course, but in 1949 UN mediator Ralph Bunche sent a letter to Israel and Syria denying Israel's claims of sovereignty over the area to be included in the Armistice Agreement. In language that ironically foreshadowed current Israeli diplomacy he declared, 'Questions of permanent boundaries, territorial sovereignty, customs, trade relations and the like must be dealt with in the ultimate peace agreement and not in the armistice agreement.'

In 1967, the Israelis took the lot, and subsequently annexed the whole of the Golan Heights. But since Resolution 242 calls for Israeli withdrawal from territories occupied in 1967, that presumably includes the Golan, and the strip of Mandatory Palestine and the demilitarised zone, which should fall to the Palestinian state. At the very least, if the 1967 boundaries are to be negotiated, then these territories should be Palestine's to regain – or at least to be countered with equivalent concessions from the other side.

Over on the other coast, Lebanon raised the issue of UN help in demarcating the maritime boundary in the Mediterranean, where Beirut considers that it has claims to some of the natural gas fields Israel is claiming as its own. Indeed, a quick glance at a map suggests that the Lebanese do indeed have a point. However, the UN spokesman said – correctly – that Resolution 1701 only covered the UN delineating the land boundary between the two countries. Now Israel has become very upset because the UN Special Representative for Lebanon, Michael Williams, has said – equally correctly – that the UN could help clarify the boundary.

In fact, not only are there clear legal principles, not least under the

International Treaty on the Law of the Sea, for marking maritime boundaries, but there are fora, such as the Hamburg-based International Tribunal on the Law of the Sea, and the International Court of Justice itself, where interpretations of those principles could be argued. Israel's distress at this suggests that it does indeed have some doubts about its legal claim to the full extent of the gas fields. As the American poet Robert Frost noted, 'good fences make good neighbours.' On land and at sea, it is in everyone's long-term interest to agree upon boundaries – unless a party has designs to move the posts permanently.

Bringing together these issues, the Palestinians have been threatening to take two issues to the UN. Firstly, to recognise Palestine as a state, as well over 100 UN members already have, and, secondly, to condemn the illegal settlement building in East Jerusalem and the West Bank.

It is a sad epithet on US President Barack Obama's initial enthusiasm for building relations with the Muslim world that Washington seems to have promised Israeli premier Benjamin Netanyahu to veto both. Perhaps in gratitude for the prime minister's compliance with oft-repeated and humiliating US pleas for a mere settlement freeze?

It is a great opportunity missed. Despite its bluster, the Israeli government is worried about UN resolutions, and not vetoing them would be a painless way for the US to exercise some leverage on the recalcitrant Likudniks. If US Secretary of State Hillary Clinton can condemn settlements, then why veto the UN Security Council doing the same? If President Obama can look forward to a Palestinian state, then why shouldn't the UN follow the wishes of a clear majority of its members?

Sadly, like Israeli legal exegesis, these are mysteries beyond understanding. ◆

Ian Williams is a freelance journalist based at the United Nations and has a blog at www.deadlinepundit.blogspot.com. This article is reproduced from the Washington Report on Middle East Affairs *(March 2011).*

British brutality against colonial resistance movement in Kenya revealed

Substantiating their claims with a cache of recently revealed British government documents, a group of veterans from the Kenyan Mau Mau movement recently gave graphic evidence before a British court of the extent of the brutality employed by the colonial authorities to suppress their struggle for independence. *Murithi Mutiga* explains the background of this historic trial.

THE British justified their imperial adventures in Kenya by saying they set out to 'civilise' the natives.

The methods they used were among the most barbarous employed by any occupying power in the last century and included arbitrary detention of populations in whole regions and the torture and murder of thousands of individuals whose only crime was to defend their right to ancestral land.

This is some of the evidence contained in thousands of newly released documents about Britain's colonial policies in Kenya when the Mau Mau war of liberation was at its peak.

Compensation suit

The files, estimated to contain about 17,000 pages of material, were released on the orders of the High Court in London as part of a compensation suit filed by five former Mau Mau fighters who say they were among the thousands subjected to torture in detention camps.

Ndiku Mutua, Paulo Nzili, Jane Muthoni Mara, Gitu wa Kahengeri and Wambugu wa Nyingi say they suffered sexual abuse, arbitrary incarceration and castration at the hands of British soldiers and their African collaborators.

It is thought that the new material, said to have been held in the basement of the Foreign and Commonwealth Office for the last 50 years, will have a bearing on the outcome of the case and may boost the claimants' appeal for compensation.

'The contents are dynamite,' says Paul Muite, one of the lawyers representing the five. 'The documents have verbatim records of conversations between the governor and the colonial office on many matters including Mau Mau and torture. Without doubt, the contents are extremely embarrassing to Her Majesty's Government. It is a boon to the Mau Mau.'

Not all the revelations are new. The extensive torture and killing of Mau Mau fighters and detainees was documented by two historians, Caroline Elkins from Harvard and Oxford University's David Lee Anderson, in their 2005 books, *Britain's Gulag* and *Histories of the Hanged*.

Prof Elkins' book in particular gives a vivid account of the shocking crimes committed by the British, which, ironically, came only seven years after the end of the Second World War in which the British and their allies set out to end the torture and mass killings in Nazi Germany and occupied countries.

The author showed the British used similar tactics in Kenya, including a 'pipeline' system of detention which involved the jailing of nearly the entire population of Central Kenya.

Her book was criticised by some in the West who said her allegations were based on shaky evidence because she relied heavily on the statements of survivors compiled over a period of nearly 10 years.

The official record, which had been held under lock and key for half a century, will be seen as vindication of many of the assertions in her book describing the methods employed in the State of Emergency declared between 1952 and 1961, a period described as one of the most inglorious chapters in British imperial history.

Prof Elkins told the *Sunday Nation*: 'The documents validate what many critics have tried to deny in my work. That is, that the detention camps of Kenya were sites of systematised brutality that only worsened as the Emergency dragged on, and that officials at the highest level knew of these abuses. Second, they provide us with additional details of the events of the Emergency that we otherwise would never have known. And, finally, they reflect the extent to which the British government went to cover up the abuses in Kenya.'

First revealed

The release of the files to the law firm Leigh Day & Co, which is handling the case on behalf of the claimants, was first revealed by *The Times* of London on 5 April.

The paper said the files contained in 300 boxes were taken out of Kenya because, according to a memo by a Foreign Office official, they contained material that 'might embarrass Her Majesty's Government, might embarrass members of the police, military forces, public servants or others'.

The memo quoted in *The Times*

and marked 'Most Secret' stated that the 'vast majority' of the files concern the Emergency. Dr Anderson has been helping the Mau Mau claimants' lawyers evaluate the newly released material.

In a statement filed in court, he told the judge that civil servants at the Foreign Office were slow to release the remaining material and were selectively releasing the files rather than handing them out in sequential order.

Dr Anderson told the *Sunday Nation*: 'We have long known about British torture and brutality in Kenya, but these newly discovered documents do shed fresh light on the story as well as providing fuller details of the abuses, especially by screening teams and in the notorious detention camps. The documents show how British officials debated their actions, changing the laws and prison regulations in order to cover what they were doing.'

Colonial governor Evelyn Baring declared a state of emergency on 20 October 1952 following a spate of attacks by Mau Mau insurgents fighting to reclaim land in the 'White Highlands' from which they had been uprooted by settlers.

The British sent in several battalions from colonies in the Middle East and Africa, a navy cruiser and dozens of aircraft to fight the Mau Mau.

They teamed up with Kenyans who had opted to work for the colonialists in an eight-year effort to crush the insurgency.

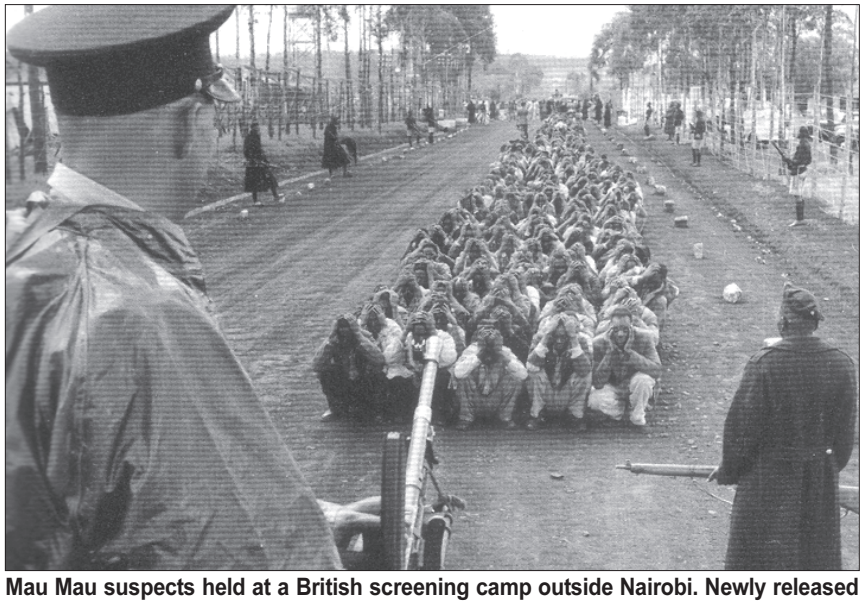
The methods they used were brutal. Ndiku Mutwiwa Mutua told the London court he was a 24-year-old herdsman when he was arrested by British officials in 1957.

After refusing to confess to being a member of the Mau Mau, he was castrated and held until the Emergency ended.

Killings and torture

Many others did not live to tell the tale. At least 12,000 were killed either fighting in the forest or after arrest by the British forces or the indigenous Home Guard.

Hundreds of thousands were detained in squalid camps fenced off with barbed wire and subjected to horrific torture. One colonial settler quoted in *Britain's Gulag* boasted about not knowing an African 'had so many brains until we cracked open a few heads'.



Mau Mau suspects held at a British screening camp outside Nairobi. Newly released documents shed fresh light on British abuses and torture in Kenya during the Mau Mau war of liberation.

In another detention camp, a man who refused to confess to being a member of the Mau Mau was smeared with a weed known to attract mosquitoes, stripped naked and left in a pit to die from the feasting insects.

Others had their skin burnt while many more suffered indescribable sexual assault.

The torture of some was as much psychological as it was physical. In one passage, Prof Elkins quotes a witness recalling the result of a colonial soldiers' sweep through their village.

'At one point the villagers were ordered to remove every article of clothing and remain stark naked. You cannot start to imagine the shame and embarrassment we felt when ... we were told to arrange ourselves in two rows, one for the men and the other for the women, old and young alike. To everyone's horror we were ordered at gunpoint to embrace each other, man with a woman, regardless of whether the man happened to be your father, father-in-law or brother. It was all so humiliating that one woman hanged herself later, as she felt that she could not continue to live with the humiliating experience of having been forced to embrace her son-in-law while both of them were naked. In (Kikuyu) custom that is a curse.'

Until the new documents were released, most of these records remained gruesome yet unsubstantiated reports of the brutality of the last days of the British empire in Africa.

The latest documents offer evidence of what was one of the worst periods in colonial African history, although the disclosure of the files may have come too late for some of the survivors.

'The release of these documents can only help the legal case for compensation insofar as they reveal the extent to which the British government went to hide evidence,' says Prof Elkins.

'However, it will take many months if not years to go through these documents properly, and the case is one that has urgency to it, as the claimants are quite old. So, by withholding these documents for so long, the British government has been complicit in its own defence in the case. In other words, they have said that there is not enough evidence to try the case, yet at the same time they have been withholding thousands of files of evidence from public view.'◆

This article is reproduced from the Sunday Nation *(Kenya) (10 April 2011).*

Algerian women test the 'Arab spring' winds

To appease 'Arab spring' protesters, Algeria lifted a 1991 law that banned public assembly, but a longstanding women's vigil for the country's 'disappeared' complains it doesn't help them. Other political women debate the effects.

Brahim Takheroubte

Women at a weekly vigil in Algiers holding portraits of their relatives who disappeared in Algeria's 1992-2001 civil war.

THE late-February lifting of the state's emergency powers law hasn't helped the women who keep a weekly vigil in the Algerian capital of Algiers for relatives who disappeared in the country's 1992-2001 civil war.

'We are prevented from demonstrating, we are still under surveillance and each time we try to march police violently shove us around and flood us with vulgarities,' said Amel Boucherf.

For years she and other women whose relatives disappeared during the war have convened at the same place: the headquarters of the National Advisory Commission for the Protection and Promotion of Human Rights.

The female protesters, who have been gathering for 12 years, are a fixture of capital life. They wear headscarves, raise portraits of their missing relatives and chant slogans for 'Justice and Truth' as well as against 'Oblivion and Impunity'.

'They say they've lifted the state of emergency but that is just a PR move, as in reality nothing has changed,' said Boucherf.

Lifting the emergency law – which banned demonstrations and restricted assembly – was a key demand of opposition groups who have been staging weekly protests in Algiers as part of the 'Arab spring' of pro-democracy unrest.

Arab leaders from Algeria to Yemen have been making concessions in the hope that their governments will not be the next to be toppled in unprecedented protests inspired by the popular uprisings of Tunisia and Egypt.

But Boucherf says no concessions are reaching her group of demonstrators. For months, police have stopped the protesters from gathering at their customary meeting point.

Farouk Ksentini, president of the National Advisory Commission for the Protection and Promotion of Human Rights, has said that the case of missing people is closed and he will not tolerate the staging of further demonstrations linked to this cause in front of the institution.

6,544 officially missing

Officially, 6,544 were declared missing during the civil war.

'We reject that number because our files show 8,000 people went missing,' said Boucherf, adding that police on several occasions dragged her on the ground to prevent her from demonstrating.

Nassara Dutour, who heads the Collective of Algerian Families of the Disappeared, echoes Boucherf's disappointment.

'We thought that the lifting of the state of emergency would permit us to express ourselves, but we are seeing the same dramas unfold,' she told Women's eNews service.

The Algerian conflict, which pitted rebel Islamists against the government, cost 200,000 lives overall and displaced nearly one million people, according to official figures. It also weakened the women's rights movement as activists received death threats from fundamentalist groups.

But since the end of the war in 2002, human rights groups have complained that the main purpose of the state of emergency was to control civil society and choke political opposition through limits to the right to assembly and arbitrary detentions.

The emergency law is still palpable in everyday life and makes it hard for women in rural areas to reach the capital, said Maache Zine, presi-

dent of Wafa, an organisation that promotes handicraft production in rural areas and is headquartered in M'sila, about 185 miles southeast of the capital.

'We are faced with dozens of checkpoints that create considerable delays,' Zine told Women's eNews at a conference on the economy held in Algiers on 3 March. 'Each time we have to show we have permission and each time we have to prove that we have no links to terrorism.'

Rural women a world apart

Zine was attending the conference to advocate for better employment opportunities for women in rural areas, who live a world apart from their wealthier and better-educated urban counterparts in the capital.

In rural areas, illiteracy rates are higher, early marriages common and most of women's work limited to the home or informal sectors.

Women in Algeria represent almost a third of the labour force. They make up 70% of Algeria's lawyers and they dominate the medical profession. More than 60% of university students are women and 68% of Algerian women can read and write, according to the ministry of education.

But even among more privileged Algerian women the chances for political participation are limited, with only 10% of women serving in parliament, according to the Minister for the Family and the Status of Women Saadia Nouara Jaafari.

Saida Benhabiles is president of the pro-government International Association for the Victims of Terrorism, which provides psychosocial support to women traumatised by the civil war. Many of these women lost relatives during a wave of terrorist attacks that rocked the country from 1998 to 2002.

Benhabiles said the state of emergency provided a safe framework for her organisation, which operates in isolated rural areas that were more vulnerable to terrorist attacks since security services were stretched thin.

'We had to venture to far-flung places where terrorism was quite widely spread so it was a source of security for us,' she said.

A protester demonstrating in front of riot police in Algiers. Lifting the emergency law was a key demand of opposition groups who have been staging weekly protests in the Algerian capital.

Emergency law to restrain rebels

The civil war pitted various Islamist rebel groups against the government after elections won by the Islamic Salvation Front in 1991 were annulled. The government imposed the emergency law to restrain those rebel groups.

'Usually, women used to put perfume before going to bed, but in the years of terror, we wore oil on our necks so that if terrorists came to cut our throats we would not suffer,' said Benhabiles.

President Abdel Aziz Bouteflika, in power since 1999, has said the lifting of emergency powers will not interfere with the government's anti-terrorism efforts against armed Islamists.

But information travels poorly in rural areas. Some women, said Benhabiles, don't fully grasp what the state of emergency means, while others never knew it even existed.

'The first thing they ask is "will this new measure allow us to sleep peacefully at night?" or "who is this state of emergency?",' she said.

Benhabiles, who won a United Nations civil-society prize in 2001 for her leadership of the Algerian Association for Rural Women's Rights, explains that the state of emergency typically meant police or army roadblocks.

'Immediately fear comes over their faces, they do not want to return to a state of chaos,' she told Women's eNews.

Alloua Amel heads the regional bureau in Setif – about 250 miles east of Algiers – of a national advocacy group for rural families. She places less emphasis on the state of emergency.

'Having or not having the state of emergency changes nothing,' she said. 'The important thing is to open up communication channels with rural women because they are practically non-existent.'

'While men head to cafes and public places to discuss things among themselves, women in rural areas cannot because they are not even allowed to go out,' Amel added. – *Women's eNews* ◆

Brahim Takheroubte is an Algerian journalist and editor in chief of l'Expression *newspaper. In 2007, he was a visiting scholar at New York University Graduate School of Journalism and completed a six-week internship at the* Seattle Times. *He is a graduate of the Universite des Sciences and Technologie Houari Boumediene (USTHB) in Algiers. This article, originally published by Women's eNews (www.womensenews.org), was translated from an original version in French by Dominique Soguel.*

Sadako Kurihara (1913-2005) was a Japanese poet who lived in Hiroshima and survived the atomic bombing during the Second World War. The following poem, probably the most famous of her literary outputs, is based on a real-life event.

We Shall Bring Forth New Life

Sadako Kurihara

It was night in the basement of a broken building.
Victims of the atomic bomb
Crowded into the candleless darkness,
Filling the room to overflowing –
The smell of fresh blood, the stench of death,
The stuffiness of human sweat, the writhing moans –
When, out of the darkness, came a wondrous voice.
'Oh! The baby's coming!' it said.
In the basement turned to living hell
A young woman had gone into labour!
The others forgot their own pain in their concern:
What could they do for her, having not even a match
To bring light to the darkness?
Then came another voice: 'I am a midwife.
I can help her with the baby.'
It was a woman who had been moaning in pain only moments before.
And so, a new life was born
In the darkness of that living hell.
And so, the midwife died before the dawn,
Still soaked in the blood of her own wounds.
We shall give forth new life!
We shall bring forth new life!
Even to our death.

Translated from the Japanese by Wayne Lammers