EFFECTS (+ SUPPORT)

T. 16/12/83

Atom tests damage not proved

Times 16/12/83

From Tony Duboudin
Melbourne

Studies on Australians who took part in British atomic tests on Monte Bello Island and at Maralinga in the 1950s and 1960s have concluded that there is no evidence to suggest the tests had adverse effects

The studies, tabled in the Senate yesterday, were carried out by the Federal Department of Health and looked at the health of more than 9,000 people.

Dr Neal Blewett, the Minister for Health, said he had long recognized the concern of many former participants in the tests about the possible long-term effects of exposure to radiation. However, these latest studies confirmed that it was not possible to demonstrate that exposure to radiation had had significant adverse effects.

In February, Mr Doug Rickard, a member of the health physics team at Maralinga from 1957 to 1959, suggested that radiation readings taken from people involved in the British tests had been faked.

Sir,—You quote the Home Office Minister, Douglas Hurd, on the subject of estimated blast casualties in a nuclear attack ("Studies showing areas vulnerable to nuclear war kept secret," December 15). He says that "a lot of the scientific argument [between the Home Office and its critics] is how right it is simply to accept the American calculations even though, for example, British housing tends to be a good deal more solid than American housing."

British architects and builders, would I think, acknowledge that this is not the case. But in any event this is *not* what the principal argument is about: which is whether blast casualties should be predicted on the basis of data from actual nuclear weapons effects (as the Americans do) or on the basis of data from conventional bombing in the Blitz (as the Home Office does)

The Home Once itself has acknowledged on several occasions that its own approach is likely to lead to serious underestimates.

Philip Steadman.
Centre for Configurational Studies,
The Open University.

C.
25/12/84

Chilling prospect of a nuclear winter

From Dr Norman Myers

Sir, I read with interest David Watt's comments on December 9 about the film *The Day After*, and his speculation on whether the scientific prognosis of a nuclear winter is correct. Having participated in the background research in the United States during the past several months, I do not agree that there are "many uncertainties in the hypothesis" that warrant "understandable caution".

Both the physical and biological teams ran dozens of variations of their computerized models to check their findings, and they concluded that their anaylses were reinforced time after time, with virtually no significant variations in the outcome. Whether we consider a 10,000-megaton or only a 1,000-megaton war, the results produce a nuclear winter. In certain circumstances a mere 100 megatons can trigger a similar phenomenon (Britain possesses more than 100 megatons).

The papers, being published in the major American journal *Science*, have undergone unusually rigorous appraisal through extensive peer review. If one can be permitted the phrase, there is an "overkill" of supporting evidence to justify the findings. Several independent research efforts have come up with parallel results.

To quote the summary of the biological paper, authored by 20 leading scientists from several countries, "It is clear that the ecosystem effects *alone* resulting from a large-scale thermonuclear war could be enough to destroy the current civilisation in at least the northern hemisphere . . . the combined intermediate and long-term effects of nuclear war suggest that eventually there might be no human survivors in the northern hemisphere."

All this reiterates a key question. Can government leaders afford to contine with their present response to the nuclear threat, with the new risks of a nuclear winter – precisely at a time when more weapons are being deployed? Or should they not rather consider the alternative risks of taking a closer look at whatever measures are necessary to throw the nuclear arms race into reverse? Perhaps the prospect of a nuclear winter will help us to achieve at least a nuclear freeze.

Yours faithfully,
NORMAN MYERS,
Upper Meadow,
Old Road,
Headington,
Oxford.
December 13.

From Professor Sir Frederick Warner, FRS

Sir, David Watt (December 9) has written about the aftermath of nuclear war and Carl Sagan's comment that the prospect of a "nuclear winter" frightens him more than *The Day After*.

A committee of the International Council of Scientific Unions is engaged in a study of this and longer term effects than the immediate deaths following a nuclear exchange.

A workshop in Stockholm during November decided to re-examine the scenarios for different scales of nuclear exchange and conduct further research in several countries on atmospheric chemistry, climate change and biological effects. The next, on agriculture, will be in Delhi from February 9 to 11, 1984, and the one after in Leningrad in May.

General planning is being done by a steering group of leading scientists from the USA, USSR, France, Sweden, India and Japan, under my chairmanship. The Royal Society has financed a research assistant to work with me at the Universtiy of Essex, which has provided accommodation.

So far we have not had the "dog fight" nor the pause expected by David Watt. We have had to work hard to provide the discussion papers which scientists need for useful discussions and to start by concentrating limited resources on facts which can be agreed or further explored by experts.

Yours faithfully,
NED WARNER, Treasurer,
Scientific Committee on Problems of the Environment,
As from: Chemistry Department,
Essex University,
Wivenhoe Park,
Colchester, Essex.
December 9.

Nuclear aftermath

Sir,—In the article *Atmospheric effects of a nuclear war* Dr J. W. Birks and Professor P. J. Crutzen (*Chem. Br.*, 1983, 19, 927) present a very gloomy pessimistic view of the aftermath of a nuclear conflict. Whilst the immediate effects of such a disaster and the resulting chaos are likely to be grim, I cannot accept the correctness of all the atmospheric effects calculated. A typical feature of tropical Africa is the deliberate burning of grass savannah at the end of the dry season so as to encourage fresh growth with the onset of the rains.

Ankole in Uganda, an area of some 600 square miles, is a typical example. Ankole is largely covered with dense stands of grass, mainly *Hyparrhenia filipendula* and *Themada triandra*, which at the end of the dry season are very dry and burn quickly and completely. Burning occurs over a period of a week. Winds are light. This scenario would seem similar to that posed in the article. Large clouds of smoke form but do not persist and certainly there is no diminution of sunlight of any consequence. What are seen are unusually beautiful sunsets. A regrettable result of such activity is unfortunately the destruction of forests with the resultant drop in rainfall.

M. LONG
52 Palmer Road,
Angmering, Sussex.