

vaccinations in a million might lead to poliomyelitis infection was not sufficiently explicit to pass on to the parents of a vaccinated child. The committee says that "the sceptical reader" may fairly conclude that US courts behave as if "the manufacturer is responsible for all damages caused by a vaccine".

The great swine influenza fuss of 1976 is offered as a complicating precedent. Out of fear of a swine flu epidemic on the scale of the 1919 influenza epidemic, and in the face of manufacturers' unwillingness to produce vaccine in the time required without indemnity, the US Congress passed legislation placing liability for damage on the federal government, which was afterwards interpreted (by the then Secretary of the Department of Health Education and Welfare, Joseph A. Califano) to imply that strict liability for all injuries would rest against the United States.

In the event, the influenza epidemic did not materialize, but among those vaccinated, between 1 in 100,000 and 1 in 200,000 developed the neurological complications of the Guillain-Barré syndrome. The US government has already paid out \$73 million to claimants. Legal cases stemming from the episode have tended to be settled on the basis of strict liability.

The Sanford committee's proposal that there should be a permanent vaccine commission takes the somewhat unusual form of recommending that the commission should be set up, at a cost estimated at \$1 million a year, as a congressionally chartered body, reporting annually. But the committee says that other locations of the commission within the US government structure would be acceptable.

The committee argues that the case for compensating victims and their families stems from the fact that vaccination is sometimes compulsory (as for children entering the educational system) and that vaccination of an individual contributes to the public as well as the personal good.

On balance, the committee is for a system in which compensation would be paid from a fund recruited by a levy on vaccine sales. It emphasizes that such a scheme would not absolve manufacturers from the duty to avoid defects in their products.

The amount of compensation to be paid, the committee argues, should be devised so as to "restore the incentive to participate" in vaccination programmes, avoid financial devastation of victims' families, keep vaccine costs low, avoid disproportionate spending on a field of public health which is "important [but] not the only legitimate claim on . . . resources" and to remove the incentive to litigation.

The committee leaves to others the question of whether a compensation scheme should be accompanied by an extinction of people's right to sue under the law of tort, but instead offers a menu of ten alternative schemes from which readers may choose. □

Australian space

Never too late to change

Canberra

WITH the launching of the first three domestic communications satellites of the Aussat-1 series later this month, the Australian government faces some difficult policy choices. The Minister for Communications, Mr Duffy, has warned that changes may be in the offing to regulations that have been on the books for 30 years. Deciding how the local broadcasting market is to be carved up between the large national networks and the smaller regional broadcasters is one problem; the provision of telephone services to remote outback communities another. While Telecom, the government's monopoly carrier for public switched telecommunications, is protected in its role by the Satellite Communications Act 1984, Aussat will compete in the areas of private leased networks, data communications and in other fields. For Australia's space-related industries, however, the big question is whether the government will assist them in rekindling an earlier vigour which petered out when ELDO (European Launcher Development Organization, of which Australia was the launch-site member) gave way to ESA, the European Space Agency, leaving the locals without a space policy coordinating body.

At a time when national communications satellites are going aloft all round the world, Australia's share in the manufacture of space systems has dwindled to the point where the weather map appearing nightly on Australian television screens is beamed down from Japan's GMS-3 meteorological satellite and people are beginning to wonder whether the governments of countries with more sophisticated space technologies know more about Australia's natural resources than do Australians.

Whether all these changes will depend to a great extent on the government's response to the recommendations of the Madigan report — a space policy for Australia published by the Australian Academy of Technological Sciences which asserts that Australia still possesses the technological and industrial ability to develop an effective space programme, but that the actors will need to be welded together by prompt government action in the formation of a space technology and research authority.

Furthermore, the government will have to invest about \$A100 million over the next five years in order to stimulate academic space research and to put Australian companies in a position to bid for international contracts by first weaning them on national research and development projects.

The Madigan report also recommended that the Australian Landsat facilities be

upgraded, and identified equipment for ground receiving stations and the remote sensing of Earth resources as immediate priorities for Australian industry.

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) was quick off the mark. Having both established a space science study group and designated space as one of its principal growth areas, CSIRO set up a body to coordinate the organization's efforts in the field, called the CSIRO Office for Space Science and Applications (COSSA). It is headed by Dr Ken McCracken, formerly chief of the CSIRO division of mineral physics.

As soon as the Madigan report was published, COSSA put forward a detailed proposal of the steps that would be needed if Australian industry was to reach the point where it could gain the prime contracts for Aussat-3, due to be built in 1994.

Two current projects were pointed out as good examples of the kind of work which would qualify Australia as a contractor: the scanning infrared radiometer developed at the CSIRO division of atmospheric research (capable of detecting 0.3° temperature changes in the surface of the sea) and the large-format detector of the Mt Stromlo-based Australian part of the FUSE/Lyman (far ultraviolet space explorer) satellite.

But the timing is crucial. COSSA estimates that local industry may have gained sufficient experience in spacecraft design to play a considerable part in the design phase of Aussat-2. But the same cannot be said for the 1989 construction phase. The bridging of this "experience gap", COSSA suggests, should be Australia's participation in the refurbishing of the US Spartan reusable spacecraft and the construction of the scientific instrument package to fly on it.

The resulting satellite — to be launched in 1988 and called Mirrabooka, an aboriginal word for the Southern Cross — will be a fast-turn-around vehicle for further experiments and, if all goes well, may qualify Australian contractors for about 30 per cent of the space acquisitions of Aussat-2, due for launching in 1992.

The government has already taken notice. Last week, the Minister for Industry, Technology and Commerce, Senator John Button, announced the award of a \$A3 million contract for three 18-m Earth stations for international television transmission of the America's Cup defence, a \$A2.5 million contract to develop rooftop Earth stations for the Intelsat business services network and a \$A18 million contract to build seven 22-m antennas at Culgoora and Siding Spring for the Australia Telescope (see *Nature* 311, 500; 1984). **Jeffrey Sellar**