

Strategic Defense Initiative

Japan ready to participate

Tokyo

BUOYED by its landslide victory in the last Japanese election, the Nakasone administration is galloping to join the US Strategic Defense Initiative (SDI). The last barrier to participation, an all-party resolution banning the militarization of space, has been brushed aside and Japan is expected to decide to join the SDI research programme by the beginning of September. But there is less enthusiasm among those who will actually carry out the research.

In March last year, Mr Caspar Weinberger, US Secretary of Defense, formally invited Japan as well as other allies to participate in SDI. Since then, three Japanese delegations have been dispatched to the United States, the last of which, after its visit in April, strongly recommended participation on the grounds that SDI research would greatly benefit Japanese industry (see *Nature* 321, 5; 1986).

Since the July general election, two cabinet-level meetings on SDI have been held and several key decisions have been made. First, all patent rights to technology developed through SDI research will pass to the United States, although Japan will try to work out an agreement to ensure the return of technology to Japan. Without such a provision, the prime incentive for Japan's private industry to take part would be lost, as the main benefits for Japan are seen to lie in commercial spin-offs from SDI.

Second, although most research will be carried out by private enterprise, government agencies will be allowed to join the research effort, and secrecy will be maintained under the existing Secrets Protection Law. Finally, the six cabinet ministers, at their meeting last week, concluded that participation in the research phase of SDI would not violate a 1969 all-party Diet resolution banning military use of space. Defence-related issues usually provoke heated debate in Japan, and last week's cabinet decision would normally raise a storm. But opposition parties have remained remarkably silent on SDI following their crushing election defeat.

Dissent within Prime Minister Yasuhiro Nakasone's own Liberal Democratic Party (LDP) has also failed to materialize. Former Foreign Minister Shintaro Abe, a contender for the LDP leadership, is known to be cool towards SDI, but in his new post as chairman of the LDP executive council he no longer has a direct say in SDI and his successor at the Foreign Ministry, Tadashi Kuranari, is a close political ally of Nakasone. Nakasone himself has made no secret of his enthusiasm for SDI since he first discussed the issue with President Reagan last year, and a decision to go ahead would no doubt

strengthen the friendship between the US president and the Japanese prime minister.

Private industry's enthusiasm for SDI is more guarded. There are fears that it could merely end up being exploited, without enjoying the "fruits" of the research, and the decision to transfer patent rights to the United States will do little to allay such concern.

Although government research agencies

will also be able to participate in the SDI programme, there may be a lack of scientists willing to carry out the research. Nearly 5,000 Japanese scientists have signed petitions against SDI, including more than 1,600 at the national science research laboratories in Tsukuba, the very laboratories at which government SDI research is likely to be carried out. The scientists' chief concern seems to be that their research would be restricted as "military secrets", but they also fear an arms race in space and the increased dangers of nuclear war.

David Swinbanks

Environmental pollution

Pushing for a new clean-up law

Washington

AFTER languishing in legislative limbo, the US Comprehensive Environmental Response, Compensation and Liability Act, better known as the Superfund, is on the road to reauthorization. A conference committee last month completed the task of reconciling differences in new authorizing legislation already passed by the House of Representatives and the Senate.

Congress established Superfund in 1980 to clean up hazardous waste sites created before the passage of legislation regulat-

ing the dumping of such wastes. Superfund's first five-year authorizing legislation expired last October. The Environmental Protection Agency (EPA), responsible for Superfund clean-ups, has kept the programme going with residual funds and stop-gap appropriations from Congress. In the final version of the reauthorizing legislation, Superfund is authorized to receive \$9,000 million over the next five years, compared with \$1,600 million called for in the 1980 legislation.

One major obstacle to the implementation of Superfund is the issue of who will foot the bill for the clean-ups. The primary reason Congress failed to reauthorize Superfund when it expired last fall was an inability to come to terms with this issue. The Congress is in the process of working out a complete overhaul of the United States' tax code. So far, the issue of new taxes to fund Superfund has not been taken up, and the issue is a divisive one. The petrochemical industry has claimed that paying the entire cost for clean-ups could be devastating for the industry's international competitiveness. One alternative is a value-added tax.

Under the new statutes, a timetable will be established for clean-ups to prod EPA to move more aggressively than it has in the past. Over the next four years, EPA will review some 23,000 potential Superfund sites around the country, with some 2,000 sites likely to be added to the 888 at present on EPA's National Priority List. Federal clean-up standards, absent from the original legislation, appear now, along with a provision that allows state standards to apply if they are more stringent.

Partly in response to the chemical plant disaster in Bhopal, India in 1984 (see *Nature* 312, 581; 1984), companies either using or creating toxic chemicals in manufacturing processes must inform local jurisdictions of their activities. This community "right-to-know" database could become a boon for epidemiologists if it is established as planned, providing information about environmental hazards. The new rules also require the Department of Health and Human Services to compile a toxicology profile on the commonest chemicals at Superfund clean-up sites.

Some critics of the new bill are concerned that issues of corporate liability have still not been adequately dealt with. Others say it does not go far enough to solving the problems caused by hazardous waste sites. A report by the Office of Technology Assessment (OTA) suggested that it would cost closer to \$100,000 million to clean up all the dump sites that could be eligible for Superfund action. OTA's Joel Hirschhorn says that for the first time funds will be available for developing new clean-up technologies, but otherwise sees no major improvement in the Superfund law. "It's one thing to throw money at a problem", says Hirschhorn, "and another to solve the problem."

Joseph Palca



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